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MANAGEMENT OF ASBESTOS IN PUBLIC BUILDINGS

HEARING

BEFORE THE

SUBCOMMITTEE ON
HAZARDOUS WASTES AND TOXIC SUBSTANCES

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

SECOND SESSION

ON

S. 981, S. 1809, and S. 2687

BILLS RELATING TO THE MANAGEMENT OF ASBESTOS IN PUBLIC BUILDINGS

SEPTEMBER 27, 1988

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MANAGEMENT OF ASBESTOS IN PUBLIC BUILDINGS

TUESDAY, SEPTEMBER 27, 1988

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON HAZARDOUS WASTES AND
TOXIC SUBSTANCES,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:38 a.m., in room 406, Dirksen Senate Office Building, Hon. Max Baucus [chairman of the subcommittee] presiding.

Present: Senators Baucus, Lautenberg, Reid, Durenberger, and Chafee.

Also present: Senator Stafford.

OPENING STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Senator BAUCUS. The subcommittee will come to order.

I welcome our witnesses this morning who have come to testify on the management of asbestos in public buildings. Last February, EPA reported to Congress on its study of the extent of asbestos in public and commercial buildings. EPA found that approximately 20 percent or 700,000 of the Nation's public buildings contain friable or crumbling asbestos material, and 300,000 of those buildings contain significantly damaged asbestos material. While EPA has recognized that asbestos poses a serious threat to public health, for the moment, no regulatory action has been proposed.

It is absolutely central to any discussion of asbestos control to be mindful of the fact that we are talking about one of the most lethal substances known to man. Asbestos is a known killer. There is no safe level of exposure. It is equally true and particularly disturbing that poorly managed abatement and removal actions can result in more damage and harm to human health than the mere presence of asbestos itself.

In the absence of a Federal program to address asbestos in nonschool buildings, the real estate and lending industries have had to proceed with little or no guidance on how to respond to the presence of asbestos in buildings. We will hear many examples this morning of the confusion that has resulted. We will also hear of many cooperative efforts that have been developed within the real estate and related industries to address the problem.

Senator Stafford and I have both introduced legislation to regulate asbestos in public buildings starting with those owned and

leased by the Federal Government. S. 981, Senator Stafford's bill, further requires EPA to set a schedule for the inspection of other commercial buildings. Most recently, Representative Florio introduced legislation in the House that would strengthen the AHERA accreditation procedures and regulate asbestos in public and commercial buildings starting with those that are owned or leased by the Federal Government and the States.

This is the first of several hearings on this subject. There is not enough time remaining this year to enact legislation. However, the legislation before the committee will serve as the basis for action early next year.

We have a full agenda this morning and a distinguished list of witnesses, including former Governor Carey of New York who is now the executive vice president of the W. R. Grace Company.

Before we begin, I want to welcome Senator Stafford, the chairman emeritus of the committee. Senator Stafford has been a leader and one of the foremost advocates of measures to protect public health and the environment. This has certainly been the case in promoting control of asbestos.

Senator, do you have an opening statement?

OPENING STATEMENT OF HON. ROBERT T. STAFFORD, U.S. SENATOR FROM THE STATE OF VERMONT

Senator STAFFORD. Thank you very much, Mr. Chairman, for your very gracious remarks. It is a pleasure for me to work with you and Senator Chafee and other members of this committee on the important issue of asbestos.

I want to particularly commend you, Mr. Chairman, for calling this hearing today. It may be apparent to everyone here that the Congress is unlikely to enact new asbestos control legislation this year, but it should also be evident that asbestos remains an environmental issue in the United States.

This hearing is a clear sign that the Environment and Public Works Committee has not forgotten the issue and that the committee will continue to focus on the problem until asbestos hazards in buildings have been minimized.

The Senator from Vermont will not be here when the committee considers asbestos legislation next year, but I believe I can say with confidence that committee members will be looking first and foremost to determine whether the public health is being adequately protected.

The earlier remarks by Senator Baucus clearly state what we know so well, that asbestos is a deadly substance, and no known level of asbestos fibers is safe. This does not mean that the public health is best served by immediately tearing out asbestos in every building.

We have all heard stories of well meaning—or not so well meaning—efforts to rid buildings of asbestos. These efforts can result in greater exposure of building occupants than before removal work began. We also know of cases where occupants and service workers are exposed to excessive levels of asbestos without even knowing their building contains the substance.

I think it is safe to say that no one believes we yet have a satisfactory national approach to dealing with asbestos in buildings. I will be interested to hear from the witnesses what role, if any, they believe the Federal Government should play in devising a national approach.

I hope we will be given suggestions as to what types of programs can best protect people from asbestos hazards and thereby reduce unfounded fears.

Again, I commend Senator Baucus for calling this hearing and exercising leadership on this important issue. I look forward to hearing the witnesses' testimony, and I hope it will lay the groundwork for possible future congressional action.

Senator BAUCUS. Thank you, Senator Stafford.

Senator Chafee.

OPENING STATEMENT OF HON. JOHN H. CHAFEE, U.S. SENATOR FROM THE STATE OF RHODE ISLAND

Senator CHAFEE. Thank you, Mr. Chairman.

I want to commend you for holding this hearing. I must say you are a tough task master. Here we all are like school boys at the end of the year and looking forward to going home, and you keep us right here hard at work. Well, that is what we are paid for.

I look forward to hearing the testimony today. As others have said, we will not be passing legislation this year, but this is building a foundation. We will be back next year and, obviously, we have to apply ourselves to this issue.

So, thank you for what you are doing, Mr. Chairman.

Senator BAUCUS. Thank you.

Senator Reid.

OPENING STATEMENT OF HON. HARRY REID, U.S. SENATOR FROM THE STATE OF NEVADA

Senator REID. Mr. Chairman, thank you for calling this hearing today to address the subject of asbestos control in public buildings. The witnesses before us—representing the real estate industry, labor unions, and building management and owners, and former asbestos manufacturers—will outline the problems confronting them because of the threat posed by the presence of asbestos in buildings.

Little question exists about the health hazards of asbestos. Asbestos is a known human carcinogen that causes lung and other cancers. According to EPA studies, past exposure to asbestos causes 3,300 to 12,000 cancer cases a year in this country. Almost all of these cases are fatal.

We currently have in place a grant and loan program to assist local education agencies with asbestos control efforts in the Nation's primary and secondary schools. The question before us is whether or not a similar asbestos protection program should be implemented for non-school buildings.

In its February 1988 report to Congress, EPA determined that 733,000 public and commercial buildings contain friable asbestos material—posing a clear health risk. The agency, however, does not favor a regulatory program similar to the one established

under the Asbestos Hazard Emergency Response Act of 1986 (AHERA) for public and commercial buildings. EPA contends that a major regulatory program at this time would be counterproductive, could cost $51 billion, and prompt asbestos removal actions that cannot be adequately handled. Chairman Baucus and Senator Stafford have introduced legislation to apply an AHERA type process to Federally owned and leased buildings. Senator Chafee has also introduced a bill requiring former asbestos manufacturers to submit information about materials they produced for EPA to categorize and publish.

Mr. Chairman, the remarks of those testifying today about the presence of asbestos in buildings will be helpful to the Committee toward the develoment of a sensible approach for conducting abatement programs. Thank you.

Senator BAUCUS. Thank you.

The first witness this morning is Duncan Howard, Commissioner of the Public Buildings Service of GSA.

I would remind the witnesses that we have very significant time constraints this morning, and we are asking them to limit their remarks to five minutes.

STATEMENT OF DUNCAN HOWARD, COMMISSIONER, PUBLIC BUILDINGS SERVICE, GENERAL SERVICES ADMINISTRATION, ACCOMPANIED BY DALE GOTTSCHALK, ACTING ASSISTANT COMMISSIONER FOR REAL PROPERTY MANAGEMENT AND SAFETY, AND HENRY SINGER, DIRECTOR, SAFETY AND ENVIRONMENTAL MANAGEMENT DIVISION

Mr. HOWARD. Mr. Chairman and members of the subcommittee, I am pleased to have been invited to appear before you today to discuss the General Services Administration's asbestos abatement and control program.

Before I do, I would like to introduce two people at the witness table with me. To my right is Dale Gottschalk, Acting Assistant Commissioner for Real Property Management and Safety. To my left is Mr. Henry Singer, Director of Safety and Environmental Management.

Our asbestos abatement and control program is based on the OSHA and EPA regulations and guidance. In addition, we have engaged in a number of joint efforts both with EPA and OSHA and, most particularly, with EPA in the recent past in carrying out our program. All of our buildings have been surveyed to determine both the presence and location of asbestos in the buildings and the condition of the asbestos.

At this point, I would like to submit for the record the General Services Administration's summary report. The committee has a copy of that already.

Our policy relative to asbestos is very simple and revolves around the assessment of the condition of the asbestos material itself. We abate, which involves removing, enclosing, or encapsulating asbestos-containing material that is damaged or subject to damage. We control or manage asbestos-containing material that is not damaged or not subject to damage. Under our control program, we remove, enclose, or encapsulate asbestos-containing materials

when we are making building renovations that would affect those materials.

Our control program, obviously, is important, because we operate many facilities with asbestos. For buildings that contain asbestos, we designate an individual as a facility asbestos control manager who is responsible for the asbestos control program.

We develop and implement special operations and maintenance procedures for our buildings that have asbestos in them. These would include such activities as special cleaning techniques.

For example, we use wet cleaning methods on hard surfaces so that fibers are not dispersed into the air. We have special precautions that we require for maintenance activities. We do some work after hours. We implement special precautions before we go above suspended ceilings when asbestos is present.

We also implement precautions on construction work that would go on in a building to make sure that we don't inadvertently demolish materials in a building that contain asbestos. We have controls for contractors so that those who are doing work in the building do not inadvertently disturb asbestos materials.

We train our workers in the procedures to make sure they know what they have to do relative to asbestos. We provide personal protective equipment for those workers when they might be exposed to situations that would require such protection. We provide medical monitoring of employees who are routinely exposed.

A key element of our control program is communication with occupant agencies so that they can keep their own employees informed of asbestos activities in our buildings. We also take periodic air samples to ensure that our buildings are within the OSHA action levels for airborne asbestos. We periodically reinspect our buildings to see if the condition of the asbestos-containing material has been changed by damage or deterioration.

We also have provisions to avoid acquiring new space that contains asbestos. For example, in our building purchases program, we survey buildings before purchase to avoid buying buildings that have asbestos-containing materials. We also have specific requirements in our specifications for new construction and renovations to use asbestos-free building materials.

Another key element of the program is controlling the acquisition of leased space. We have provisions in our standard solicitation for offerors which prohibit leasing space that has friable asbestos-containing material. We understand that this policy is consistent with the policies of companies such as IBM, AT&T, and Chrysler who no longer consider leasing space in a building with asbestos.

We believe our program is responsive and assertive. Our buildings have been surveyed. We have obligated over $37 million for asbestos abatement projects thus far and have projects in progress as well as projects planned for the future.

We are abating asbestos if it is damaged or subject to damage. We are managing or controlling it if it is not damaged or subject to damage. We are removing it, enclosing it, or encapsulating it during renovations if it is going to be affected.

The GSA asbestos program is based on EPA's guidance and has much in common with the Asbestos Hazard Emergency Response

Act and regulations that apply to schools as well as the two bills, S. 931 and S. 1809, that this subcommittee is considering.

Regarding these bills, we understand that EPA has concluded that a major Federal regulatory program for public and commercial buildings would not be prudent at this time. This is because of a lack of existing infrastructure to handle the asbestos removal actions it would generate in a manner which would result in lower risk than currently exists.

EPA also indicated that such legislation at this time would take emphasis and resources away from the area of greatest risk covered by the school program. Further, EPA cited the need to assess the efficacy of the AHERA school rules before extending them to other sectors.

Senator BAUCUS. I am going to have to ask you to wrap up your statement, Commissioner.

Mr. HOWARD. This concludes my remarks, Mr. Chairman. I would be happy to answer any questions you may have at this time.

[The Asbestos Program Summary Report follows:]

General Services Administration
Asbestos Program Summary Report

1. Program Overview

The GSA asbestos abatement and control program is structured on the Environmental Protection Agency (EPA) guidelines, including the school rules and subsequent guidance of 1983 and 1985, and the requirements of the Occupational Safety and Health Administration (OSHA) regulations on asbestos.

The GSA asbestos program is based on two comprehensive nationwide surveys conducted in 1980-81 and in 1985-86. The surveys included an on-site assessment of existing GSA-controlled and leased buildings to determine whether they have asbestos-containing materials.

The GSA asbestos policy, while initiated in 1979, has been revised and refined over the years by experience gained in carrying out the program and by comments and review by other agencies such as EPA, OSHA, and the National Institute for Occupational Safety and Health (NIOSH). The policy is composed of the following major requirements:

- Inspection and assessment of asbestos material that may be present in GSA-controlled space;
- Establishment of a special operation and maintenance program, including periodic asbestos air monitoring and inspection of asbestos materials;
- Determination of abatement strategies and selection of abatement techniques;
- Establishment of abatement guide specifications, contract requirements, and monitoring;
- Establishment of communication mechanisms with building occupants; and
- Avoidance of asbestos containing-materials in new space acquired through leasing, purchase, or other means.

GSA's basic policy for existing buildings with asbestos materials is to abate (i.e., remove, enclose or encapsulate) the asbestos materials that are damaged or subject to damage; and to manage or control asbestos materials that are in good condition or not subject to damage. Asbestos materials which are under management and control will be enclosed or encapsulated, or removed and replaced with non-asbestos materials during building renovation, repair, and alterations if the asbestos will be damaged or abatement is cost effective.

An action plan is required for implementation in each building identified as containing asbestos materials. The GSA action plan is an equivalent document to the management plan requirement found in the Asbestos Hazard Emergency Response Act (AHERA) of 1987. The GSA action plan includes an initial survey assessment, special operations and maintenance program, periodic air monitoring, personal monitoring, corrective action plan, reassessment, and recordkeeping. For each building containing asbestos materials, a designated Facility Asbestos Control Manager has the primary responsibility for implementing the action plan.

Survey results are assessed to identify conditions, locations, and forms of asbestos materials in the building. Such information is intended for custodial and maintenance personnel, occupant agencies, and contractors, so that asbestos material will not be inadvertently disturbed.

The special operations and maintenance program is modeled after the EPA's Purple Book guidance, which identifies control procedures to be utilized during operation and maintenance activities, initial and periodic cleaning of building surfaces utilizing the wet cleaning method or high-efficiency-particulate-air filtered vacuum cleaners, and work above suspended ceiling tiles which must be carried out during off hours.

Friable asbestos materials refer to sprayed-on or troweled-on surfacing materials, and damaged or deteriorated thermal system insulation. Sprayed-on or troweled-on surfacing materials include fire proofing or insulation on ceiling structures, molded or wet-applied ceiling or wall finishes, acoustical treatment, and decorations. These asbestos materials are considered friable whether they are in good condition, damaged, or deteriorated. Thermal system insulation (i.e., pipe, boiler, duct and tank insulation) having intact coverings, wall bounds, ceiling and floor tiles, and other cementitious concrete-like products are considered non-friable if they are in good condition.

GSA requires that buildings containing friable asbestos must be periodically (quarterly, semiannually or annually) air monitored under normal building conditions to determine air borne fiber levels. To date, air monitoring results in buildings containing friable asbestos have been very low. This is consistent with the EPA study on asbestos air levels in 43 selected GSA-owned buildings (EPA Report to Congress, February 1988, and EPA Building Study Report). The EPA study also indicated no difference between air levels found in buildings containing asbestos materials and the outdoor ambient air.

The scope of the corrective action plans are developed, depending on the asbestos material conditions. Such policy is consistent with the response action requirements of the Asbestos Hazard Emergency Response Act. Records of surveys, assessments, air monitoring, operations and maintenance programs, and abatement/control are kept at the buildings and in field offices to provide information for communication with the building occupants. Communication mechanisms are established between the GSA Facility Asbestos Control Manager and liaison persons of each occupant agency.

To limit the further introduction of asbestos material into the GSA buildings inventory, specific policies are established for repairs and alterations, and for acquisition of new space through such avenues as construction, purchase, transfer, exchange, or leasing. Policy requirements are also established for disposal of Government real property containing asbestos. The procurement of asbestos-containing products is restricted by the Federal Supply Service.

2. Initial asbestos survey in 1980-81

In response to the 1979 EPA School Rule For Asbestos Control, GSA initiated a nationwide survey to identify friable asbestos-containing materials throughout GSA-owned buildings (approximately 1,700) in 1980. This initial asbestos survey was completed in 1981 and looked only for friable asbestos materials, including sprayed-on or trowled-on surfacing materials and damaged/deteriorated thermal system insulation.

Screening of the 1,700 buildings for friable asbestos material was based on review of building records and the knowledge of the staff operating the building. Bulk sampling and analysis were performed by qualified contractors and laboratories on 293 buildings screened as having friable materials; 252 of these buildings were confirmed to contain friable asbestos. The results obtained were assessed using the EPA algorithm method for determining need for abatement or for implementation of a special operations and maintenance program. Of the 252 confirmed buildings, 103 were identified to have sprayed-on or troweled-on surfacing asbestos materials; the remainder had friable thermal system insulation.

A two-pronged abatement/control program was initiated. First, removal, enclosure, or encapsulation actions were initiated to abate the damage or deteriorated thermal system insulation asbestos materials where the overall damage was generally localized in mechanical space. Second, abatement and asbestos action plans were developed to address friable surfacing

(fireproofing) asbestos materials which were generally more widespread in a building and required a comprehensive architecture/engineering design, and significant funding for abatement.

A prioritization system, based primarily on the asbestos material condition, was developed for ranking the 103 buildings with friable surfacing asbestos materials. GSA's ranking methodology was evaluated by an independent on-site ranking performed by the National Bureau of Standards (NBS).

Forty-five of the 103 buildings were ranked on a priority list for necessary removal, enclosure, or encapsulation due to the condition and location of the asbestos materials. The remaining 58 buildings with friable surfacing asbestos materials were assessed to have the asbestos materials in overall good condition and each building was placed under an action plan. When repair and alterations were needed and expected to disturb asbestos materials in any form, the asbestos materials were removed and replaced with non-asbestos materials.

In the pre-1985 period, GSA's policy mirrored EPA's guidance to remove, encapsulate, or enclose friable, exposed, damaged or subject to damage asbestos materials. Friable asbestos in certain areas of a building such as fan rooms, air shafts, elevator shafts/rooms, lobbies, hallways, etc., were to be abated through removal. The application of the policy resulted in a desire for "total removal" of asbestos material throughout the 45 buildings. This goal was in line, at that time, with EPA and asbestos abatement experts who believed that total removal was the only satisfactory solution to the problem.

By 1985, EPA guidance was changing. Total removal of asbestos material in a building was no longer considered the best resolution. This was based on the experience that improper removal may cause worse contamination of building air than leaving the asbestos material in place and implementing a special operations and maintenance plan.

3. Asbestos resurvey in 1985-86

In March 1985, EPA published guidance on Control of Asbestos Containing Materials in Buildings. The guidance extends control management to cover all asbestos materials, friable or non-friable.

In response to EPA guidance, GSA called for a nationwide resurvey of all GSA-owned buildings for all forms of asbestos materials to include both friable and non-friable asbestos materials. The resurvey was conducted by professional contractors and GSA's in-house staff, who were aware of asbestos problems and were trained in the identification of asbestos materials. The survey was conducted in accordance with the EPA Purple Book guidance.

Among the 1,639 GSA-owned buildings resurveyed and bulk-sampled for all forms of suspicious asbestos materials, 1,235 buildings were confirmed to contain asbestos materials. Six hundred ten buildings were determined to have friable asbestos materials and 625 contained non-friable asbestos materials. Based on the number of GSA-owned buildings in the inventory at that time, the percentage of buildings containing friable asbestos materials was approximately 37 percent, which corresponds closely to the 39 percent referenced in the EPA report to Congress on EPA's survey of Federal buildings conducted in 1984.

GSA also leases space in privately-owned buildings to house Federal agencies. Leased space was also included in the resurvey effort. Because of the large volume of leased space (4,421 leases in 1985-86), lessor certification of the presence or absence of asbestos materials was conducted through a screening process. Of the 4,421 leased locations, 567 were certified by the lessors as having asbestos material and 2,677 were identified as not having asbestos materials; 1,177 were not certified by the lessor. On-site surveys were performed on 5 percent of the negatively certified space and on 100 percent of the space not certified or positively certified by the lessors. The presence of asbestos material was confirmed in 854 leased spaces. Based on the number of GSA leased space locations, the percentage of space containing friable asbestos material was approximately 19 percent which corresponds closely with the 16 percent referred to in the EPA report to Congress.

4. Revising and refining abatement strategy

In the fall of 1986, GSA's Administrator requested a strategy to manage the abatement projects for the remaining 18 priority buildings which were included in prospectus proposals for total asbestos removal. A Central Office team was tasked to conduct on-site evaluations of the asbestos material condition in those priority buildings to determine if total removal of asbestos materials would be necessary.

The evaluation reaffirmed our decision to remove any asbestos materials that were damaged/deteriorated, subject to damage, or expected to be disturbed in repair and alteration processes. The remaining asbestos material in the buildings would be managed under a special operations and maintenance program including periodic air monitoring and reassessment. However, the majority of the sprayed-on surfacing asbestos materials in 4 of the 18 buildings evaluated was judged low in adhesiveness and cohesiveness, and recommendations were made to have all the surfacing asbestos materials removed. The evaluation report was presented to and approved by the Administrator. The abatement strategy has been refined and has become abatement policy, not only for the priority buildings, but also for all other buildings containing asbestos material.

5. Status of asbestos abatement and renovation related projects

As of March 1988, 27 of the 45 priority buildings with surfacing asbestos materials have had abatement projects completed at a total cost of $1.92 million. Three buildings are currently in the construction phase; their asbestos abatement costs total $11.51 million. Ten buildings are under design for $56.24 million and three have been scheduled for design at a cost of $6.04 million for asbestos abatement. The remaining two buildings have been reassessed and determined to require no abatement work at this time.

Since 1981, $19.22 million has also been obligated for non-line item projects which included small scale abatement of asbestos materials in buildings with friable asbestos materials. There was an additional $4.63 million obligated for repair and alteration prospectuses in which asbestos was part of the total project. For fiscal years 1988 and 1989, there is a total of $10.65 million planned for non-line item projects and $7.71 million for line item projects not including the remaining priority buildings. To date, a total of $37.28 million has been obligated for all asbestos abatement projects.

The 1985-1986 resurvey of the GSA-owned buildings has identified an additional 253 abatement projects for a total planning cost of $27.75 million, including $7.3 million for prospectus level projects. The 250 minor repair and alterations projects for $20.45 million are tracked at the regional office level. The three major prospectus projects are tracked at Central Office.

6. Revising real property leasing policy

The GSA leasing policy has been revised to provide practical flexibility in the solicitation for offers requirements. The general policy is to avoid acquisition of new leased space with any form of asbestos material. In the event asbestos-free space is not available or it is determined not in the best interest of the Government to lease an available asbestos-free space, GSA will consider an offer for space with asbestos material on a case-by-case basis and use a two-tiered lease acquisition approach.

The first tier requirement is to prohibit leasing space containing any sprayed-on or troweled-on surfacing asbestos materials and thermal system insulation asbestos material in any condition; only asbestos material in solid matrix form is acceptable.

The second tier permits the presence of thermal system insulation in good condition. However, any friable surfacing asbestos materials or damaged asbestos materials of any type is not acceptable, unless its removal is required by the lease agreement. Any space leased with the presence of asbestos material, in an acceptable form, must have a special operations and maintenance plan in place for implementation and adherence to by maintenance personnel. The lessor must also develop and be in a position to implement an asbestos abatement program should the asbestos materials become damaged or deteriorate.

Existing leased space is treated as GSA-controlled space in the control and abatement of asbestos material. Friable fireproofing asbestos materials in existing leased space must be removed, encapsulated, or enclosed if damaged or subject to damage. Leased space with non-friable asbestos materials or with friable asbestos materials, that have been encapsulated or enclosed, must be managed through the implementation of a special operations and maintenance program set up by the lessor or the Government.

For leases with renewal options, GSA must have reached an agreement with the lessor concerning the removal, encapsulation, or enclosure of any friable asbestos materials prior to exercising the renewal option. Leased space with non-friable asbestos materials in good condition, can be renewed with an agreement to take prompt abatement action when the non-friable asbestos materials become friable or damaged. Any abatement

and monitoring costs, whether at the expense of the lessor or the Government, must be considered prior to lease renewal, to determine the best alternative for the Government's continued occupancy. The same requirements for abatement and operations and maintenance management apply to re-execution of succeeding leases, supplemental leases, and lease extensions.

7. Conclusion

The GSA asbestos control program has been ongoing since 1979 when the EPA asbestos school program was initiated. While EPA's guidance primarily focused on school buildings and OSHA regulations are directed at the occupational environment, GSA's asbestos policy and implementation program is directed towards controlling asbestos primarily in an office environment. The program is a proactive response to providing a safe and healthful work environment for Federal employees. GSA is continuing this proactive position by undertaking several initiatives pursued with NBS and EPA to enhance GSA's asbestos management control program.

A contract with NBS was executed to develop a methodology for installing automatic sprinkler anchors on surfaces with asbestos materials. This anchor installation technique has been tested with success and incorporated in a guide specification for field application. NBS is also under contract with GSA to develop devices for testing friability of asbestos materials.

GSA has supported EPA in the study of airborne asbestos levels in buildings, and is currently undergoing a joint pilot study with EPA to evaluate asbestos management programs for public buildings. In addition, GSA is working with EPA to assure that our building officials in buildings with asbestos are well trained in their responsibility.

GSA's policies and procedures are consistent with the EPA guidance and the Asbestos Hazard Emergency Response Act regulation for schools, as well as, OSHA standards. GSA's current abatement strategy is focused on distributing resources to abate asbestos materials damaged or subject to damage. Asbestos materials subject to disturbance during repair and alteration are removed and replaced with non-asbestos material. The asbestos materials remaining in buildings are under a continuous special operations and maintenance program to prevent disturbance of asbestos materials and minimize the release of airborne asbestos fibers to the building environment.

Efforts continue on abatement in the remaining 16 priority buildings identified in the 1980-81 initial survey. Plans are also in process to control and abate the asbestos identified in the 1985-86 resurvey. To maintain a quality asbestos management program, GSA is upgrading the training program, and is keeping abreast of the development of the asbestos state-of-the-art technology for asbestos abatement and control.

Senator BAUCUS. Thank you.

The basic question I have is, why not just proceed with the public buildings and maybe the commercial as well along the same lines as we did with schools. A procedure is set up. This committee felt that the time table is perhaps a bit strict, and we slipped some of the dates. Most people seem to think that those new dates are reasonable.

Why not just take the same basic approach to public buildings?

Mr. HOWARD. Mr. Chairman, I think that the approach is good. The time factor is a considerable one when you consider the number of buildings, 733,000 with friable asbestos. It is my understanding that if you looked at non-friable, that could be doubled.

Our feeling is that if we had in the Public Buildings Service with the buildings that we are controlling, an asbestos abatement plan or control program in place, but rather than submit it to EPA, which we think would be overwhelming at this point in time, it would be better to, as people went into those buildings to check, that they would be able to see those plans that are in place.

Senator BAUCUS. So, you think the concept is proper and it is just a question of timing?

Mr. HOWARD. I think that is really true. The other thing is our experience with the asbestos has been that there has been very little known about the material, and I think it is going to take some time to be able to get the kind of training and get some of the experience in training people so that we are able to do the job correctly without causing more potential damage.

Senator BAUCUS. Thank you.

Senator Stafford, do you have any questions?

Senator STAFFORD. Thank you, Mr. Chairman.

Mr. Howard, in your statement, you expressed concern with the leasing policies contained in the asbestos bills pending before this committee, that is, S. 981 and S. 1809. I assume this is because those bills allow Federal agencies to lease buildings containing asbestos if they are subject to a valid management plan.

My questions are, does GSA currently enter into leases or renew leases for any buildings containing asbestos, and, secondly, does authority to lease asbestos-containing buildings necessarily imply that GSA must lease such buildings?

Mr. HOWARD. Senator, in our regulations, we do not lease buildings that contain friable asbestos. Any new leases that are coming up, we will not lease. If there is only space available that has asbestos, we have a requirement that the friable asbestos either be encapsulated, contained, or removed from the facility before we lease it.

Senator STAFFORD. Does GSA have any estimates of how much its asbestos management and abatement program will cost either on an annual basis or overall?

Mr. HOWARD. On an overall basis, I think we are talking about $145 million, and that does not complete the program. What that did was take the original 45 buildings that we did in our survey.

We surveyed over 6,000 buildings nationwide, both GSA leased buildings as well as federally owned buildings. Based on the major abatement programs—and there are some that are outstanding. We have one in Juno, Alaska and 450 Golden Gate Avenue in San

Francisco that are major removal projects, but on an ongoing basis, there will be buildings, as time goes on once this program is finished, that either asbestos becomes damaged in them or subject to damage or there is a change in the friability of the material itself or the exposure to people.

So, it is difficult to put a final number on the situation.

Senator STAFFORD. Thank you very much, Mr. Chairman.

Senator BAUCUS. Senator Chafee?

Senator CHAFEE. Thank you, Mr. Chairman.

Mr. Commissioner, how many buildings do you own and how many do you rent? Can give me the total figure?

Mr. HOWARD. We have about 1,639 owned buildings in our inventory, and there was another 4,421 leased locations in our inventory. So, we have around 6,000 buildings not counting some that we share with the postal people which brings it up to about 7,500.

Senator CHAFEE. Judging from your description, you folks have done, it seems to me, quite a remarkable job in staying on top of this. Is it difficult to monitor the presence of asbestos, the friability of it?

Mr. HOWARD. Let me ask one of my technical experts to answer that for you. I could give you an answer, but I prefer that he do it.

Senator CHAFEE. All right.

Mr. SINGER. Determining friability is a subject of assessment, and there are some differences among different raters in terms of friability.

We are working with the National Bureau of Standards or the National Institute of Standards and Technology, nowadays, to develop an objective measuring device that would determine friability, but we are still in the development stage with that research project.

Senator CHAFEE. Is the machinery you do your testing with complicated or expensive or hand-carried mobile units or what?

Mr. SINGER. It is several hand-carried tools, and it shows some promise of being able to develop a device that could give objective and repeatable measurements.

Senator CHAFEE. It seems to me in many of these buildings that are totally sealed in, that is, the windows don't open at all, if you stir it up at all, it must get into the air conditioning system and be recycled. I noticed that in his opening statement, Senator Stafford talked about the fact that it is often better not to stir it around because of the longevity of it in the air.

Is that true? Is that a major factor in your decisions?

Mr. HOWARD. Senator, that is true. I have some personal experience on that basis. I was a regional administrator for the Department of Housing and Urban Development and was housed in 450 Golden Gate Avenue which is probably one of the major asbestos projects of GSA and one of the major study projects of the government. The air testing was done in multiple locations with fairly inexpensive, easy to carry equipment. It was monitored on a continual basis.

The levels were within the action limits, but we also opened up the air conditioning in that building so that there was full exhausting of air. There wasn't a continued mix.

However, as far as stirring up asbestos that was there, that did not appear to be a problem. The action levels were low enough so that there wasn't a problem with that.

Senator CHAFEE. Asbestos has a purpose in fire prevention primarily, I presume, plus insulation. Are there substitutes for asbestos? Is asbestos just gone as a commercial product now?

Mr. SINGER. There are many commercial products that contain asbestos, and EPA, I believe, has proposed regulations to further limit which products can contain asbestos, but when we take asbestos out, we put non-asbestos products back in place where we have a need for fire proofing or insulation. We use fibrous glass, mineral wool products, and that sort of thing.

Senator CHAFEE. But asbestos is still produced for some products?

Mr. SINGER. Yes, sir, for many products, but, normally, the products that are being produced have the asbestos rather tightly bound in the material. It is not the kind of product that would be for sprayed on fire proofing. That particular use is banned by EPA regulation.

Senator CHAFEE. Thank you very much, Mr. Chairman.

Senator BAUCUS. Thank you, Senator.

One other question I have, Commissioner, what is your view as to the propriety of continuous low level monitoring versus episodic monitoring. Some suggest that to continue a low level is important, because there are episodic releases. Others say that is very expensive and it is over kill. What is your view?

Mr. HOWARD. The monitoring, I think, is probably important. We redo our surveys continually which include the air monitoring in buildings where there is asbestos or where there is a suspected problem based on our surveys. We do the continual air monitoring on some of them. On others, we do periodic. But if you have a presence, it would seem to me just based on common sense that it would make sense to continue to do the monitoring.

Senator BAUCUS. Are you saying that you continually monitor some buildings but not others?

Mr. HOWARD. My understanding—Henry or Dale can tell you—but I do know that we monitor some on a continuing basis where we have had concern, where there has been carpet removal or a history of asbestos either in the ceilings or in carpets like we did have at 450 Golden Gate Avenue.

Senator BAUCUS. Are you therefore suggesting that some agency, perhaps the EPA pursuant to legislation, determine which buildings should be continually monitored and which buildings not, or are you suggesting that all buildings should be?

Mr. HOWARD. Henry, let me defer to you on that.

Mr. SINGER. The buildings that we monitor on a periodic basis—it is not a continuous basis. We do a monthly or quarterly monitoring of those buildings that have friable asbestos materials, for example, fire proofing throughout the building.

Senator BAUCUS. I am sorry, but I couldn't hear the last statement.

Mr. SINGER. The buildings that we monitor on a periodic basis are those that have friable asbestos materials, for example, fire proofing throughout the building. Those are the ones where we do air monitoring on a periodic basis, usually monthly or quarterly.

Senator BAUCUS. Thank you.

Senator Chafee?

Senator CHAFEE. Thank you, Mr. Chairman.

When you say you are experimenting with this hand-carried equipment and you don't have standards for it quite yet, how do you monitor now? With this equipment?

Mr. SINGER. No, the equipment is to actually get a determination of the friability of the material itself. When we do air monitoring, we are doing air tests looking for asbestos fibers or fibers in the air.

Senator CHAFEE. When you have asbestos removed from one of your buildings, I assume you contract that out. You don't do any of that yourself, do you?

Mr. SINGER. We do small projects, for example, glove bag abatement projects in some of our regions where we have trained people, yes. However, for the most part, any large projects would be contracted out.

Senator CHAFEE. Then when it is taken out, where does it go? How is it disposed of?

Mr. SINGER. That has to be bagged and sometimes containerized and taken to a land fill that is approved for asbestos waste disposal.

Senator CHAFEE. Thank you, Mr. Chairman.

Senator BAUCUS. Another question I have is this. Say you find a building that has friable asbestos in it and you have a problem in that it is a leased building and you have a tenant there. Do you wait for the lease to expire or what do you tell the tenant? How do you get the tenant out so you can go through with your abatement?

Mr. HOWARD. Our procedures have been that if there has been asbestos found during the survey or asbestos found—as a matter of fact, we monitored some that came back on the surveys and had the building owners tell us it didn't have asbestos in the building. We went out and surveyed a percentage of those buildings and found that, in fact, some of them did have that they were unaware of.

The minute we find there is something of that kind, we have the asbestos coordinator in the building in charge and the owner is required to plan a program of control and of abatement if it is either damaged or subject to damage, for instance, pipe wrappings and things like that in narrow areas where someone is going to hit it with a screwdriver in their pocket or where it may be loose in the ceiling or something of that nature.

They have to put in a program to remove that. We don't wait for the tenant to get out.

Senator BAUCUS. Have you had a problem with a tenant resisting?

Mr. SINGER. I am sure we have. I can't think of any off hand.

Mr. HOWARD. I can't either.

Mr. SINGER. But it is sometimes a negotiated process between GSA and the agencies.

Senator BAUCUS. Thank you. I have no further questions.

Senator Stafford?

Senator STAFFORD. I have no more questions.

Senator BAUCUS. Thank you very much, Commissioner, for your time. We appreciate it.

Mr. HOWARD. Thank you, Mr. Chairman.

Senator BAUCUS. Next we will have a panel consisting of Governor Hugh Carey, Executive Vice President of W. R. Grace Company; Steve Carlson, Executive Director of the California Housing Council; Joe Breiteneicher, President of Beacon Management Corporation; and Michael Shehadi, Group Senior Vice President of Charles E. Smith Companies of Arlington, Virginia.

Senator STAFFORD. Mr. Chairman, could I be indulged for just a second here?

Senator BAUCUS. Yes, go ahead.

Senator STAFFORD. This is an opportunity to publicly say hello and welcome Governor Hugh Carey. The Governor and I were both in the House of Representatives further back than either one of us probably cares to admit now.

It is very nice to see you again, Governor, and we welcome you here to this hearing.

Mr. CAREY. Thank you.

Senator BAUCUS. Governor, we are very honored to have you here. Why don't you proceed.

STATEMENT OF HON. HUGH CAREY, EXECUTIVE VICE PRESIDENT, W. R. GRACE & CO.; ACCOMPANIED BY KENNETH MILLIAN, VICE PRESIDENT, W. R. GRACE & CO. AND CHAIRMAN OF THE BOARD, SAFE BUILDINGS ALLIANCE

Mr. CAREY. Thank you very much. Thank you, Mr. Chairman.

I am here today on behalf of W. R. Grace and the Safe Building Alliance. With me is Kenneth Millian. Kenneth is Chairman of the Board of the SBA and will submit his own statement for the record regarding the status of State initiatives.

My testimony, Mr. Chairman, will focus on six basic points. First, the scientific evidence tells us that the actual exposure of building occupants to asbestos is typically very low, many orders of magnitude lower than the exposures suffered by asbestos shipyard and construction workers decades ago.

Second, removing asbestos may actually increase the risk to both building occupants and abatement workers.

Third, it is appropriate to identify asbestos materials to ensure a proper program of maintenance and repair and to protect those working with or renovating such materials.

Fourth, a national removal program based on the AHERA approach would be a massive undertaking that could exceed Superfund in cost without producing any health benefits and could produce negative health risks.

Fifth, efforts to manage the fly by night abatement firms and the shoddy removal practices that have spread like wildfire are an administrative nightmare for cities, States and the Federal Government.

Sixth, we need to ensure that our response to asbestos in buildings is guided by accurate scientific knowledge about the risks of various alternatives.

The domain of this subcommittee is familiar to me. I would indicate here that I voted with you with the tutelage of Senator Stafford to guide me in the House for many of the programs and signed myself the New York School Asbestos Safety Act to require the inspection and remediation of asbestos in New York schools.

In my present role at Grace, I am responsible for environmental policy, and I plan, as a company policy, to deal with environmental issues in the same constructive and forward looking way this committee has adopted.

As a consequence of being in the buildings products business, Grace, like many other companies, manufactured asbestos-containing materials. In fact, these products were specified under national and State buildings codes to protect human life and safety.

When Grace manufactured these products, we believed then, as we believe now, that properly installed and maintained asbestos-containing fireproofing does not endanger building occupants. A case in point is the fact that Grace fireproofing preserved the structural integrity of a bank tower in Los Angeles during a major fire in May which appeared on nationwide television. After testing every steel beam, column, bolt, and weld on five fire-ravaged floors of Los Angeles' First Interstate Bank Tower, the building's original structural engineers recently issued a report proclaiming the 62-story landmark 100 percent structurally sound and credited W. R. Grace & Co.'s fireproofing for their positive findings.

I want to draw a clear, bright line between two important concepts, occupational exposure and occupant exposure. No one disputes the legacy of asbestos-related disease left from the factories, shipyards, and building construction worksites in the 1940's and 1950's. That was occupational exposure.

But yesteryear's asbestos factories are not today's shopping centers, apartments, and office buildings. Here is what scientists in the 1980's are saying about occupant exposure in buildings:

The United States National Institute of Environmental Health Sciences, summarizing building air monitoring studies, has concluded, "the average concentrations of airborne asbestos in the vast majority of buildings with asbestos as surfacing material do not differ significantly from background air."

I go on to cite a number of other studies, and I would ask, Mr. Chairman, in view of the time constraints, that I be allowed to enter these studies in the record.

Senator BAUCUS. Without objection.[1]

Mr. CAREY. Unfortunately, the public policy actions to date have simply not addressed the scientific conclusion that high exposures to airborne asbestos fibers rather than the mere presence of asbestos materials in buildings are the real health problem.

As Dr. John Spengler, a leading indoor air pollution expert from the Harvard School of Public Health, has pointed out, the failure to make this critical distinction has, "resulted in an irrational response of removing asbestos from schools and buildings based completely on its presence." The pressure to remove asbestos even where it may be dangerous to do so is fed by doomsday predictions

[1] The studies referred to have been retained in committee files.

from the highly profitable asbestos abatement industry which is in its infancy.

Fortunately, EPA now appears to be willing to take a hard look at the scientific evidence and reevaluate how best to protect the public health. The EPA Study of Asbestos-Containing Materials in Public and Commercial Buildings, released in February of 1988, recognizes that occupant exposures may be low, removal risks high, and recommends an ambitious research program to find better answers.

Grace shares the concerns of sheet metal workers and service employees about the disturbance of asbestos materials during building upkeep. These disturbances or episodic exposures are both controllable and preventable through an operations and maintenance program.

In addition, as you will recall, Mr. Chairman, Grace took the lead with the chemical industry in both the drafting and the lobbying for S. 79, the High Risk Occupational Disease Notification and Prevention Act. In addition, Grace believes that building workers have a right to know where asbestos materials are located and should be provided with the training and equipment to protect themselves.

The OSHA asbestos regulations require protective measures for many building workers. We support tough enforcement of these regulations.

Protecting removal workers is a tougher problem. A recent Fortune magazine article observed, "Removing asbestos from a tenanted commercial building is somewhat akin to having a bone marrow transplant while running a marathon."

More and more scientists are beginning to conclude that removal rather than protecting human health can endanger it. Studies done in the United States, Canada, and the United Kingdom have shown that removals often increase asbestos levels inside buildings, sometimes for months, even when the removals are done properly.

Apart from the potential human toll of unnecessary removals, the costs are staggering. The cleanup costs to date for Love Canal with which I am intimately familiar going back ten years would only pay for removal in a handful of high-rise buildings in Manhattan.

Senator BAUCUS. Governor, can I ask you to move to a summary portion of your statement?

Mr. CAREY. Mr. Chairman, I have concluded my remarks and I await your questions. I assume the full statement will appear in the record.

Senator BAUCUS. Thank you, Governor.

Our next witness is Mr. Breiteneicher.

STATEMENT OF JOE BREITENEICHER, PRESIDENT, BEACON MANAGEMENT CORP.

Mr. BREITENEICHER. Mr. Chairman and members of the subcommittee, I appreciate being invited today. I am Joe Breiteneicher, President of Beacon Management Corporation in Boston. I am here representing the National Realty Committee on whose Environmental Policy Advisory Committee I sit.

The NRC is a Washington based organization, as you probably know, representing the nation's larger developers, owners, and financiers of income producing real estate. There are approximately 250 members of the NRC who own, manage, construct, and finance major real estate developments in this country.

As a representative of that organization, I bring to you the message that the real estate industry is actively and completely concerned about the issue. As a representative of an organization that has sought to deal with asbestos over the last five years, I bring you the message that it is a complex and difficult task.

You have heard some of it already today. You will hear more.

A clear cut message for the members of this committee, I think, is reasonably simple. Asbestos is a health threat. It is a known carcinogen. What to do with it in the short term and, clearly, over the long term has not yet been fully resolved.

Issues such as public concerns about asbestos and the lack of a definitive standard on the issue have produced a reasonably crazy environment that constantly has put properties in this country at risk and, I think, the people in those buildings and in the community at large also. We have heard already today from the gentlemen of the GSA about the issue of not leasing space in buildings that contain asbestos. I would like to suggest, as Governor Carey just has, that those buildings, by and large, are safe, but the thought is that if the GSA is not leasing such space, there must be something wrong.

The environment today in terms of asbestos is one that the market is driving decisions. Those decisions, by and large, are not intelligently conceived decisions. They are decisions based on pressures that I think are outside the basic realities of the issue and probably are in the process, as I heard you mention in your opening remarks, of producing a counterproductive situation where we stress the dump site capacity; where we stress a largely, not fully accredited removal business; and where we stress, I think, the capacity of testing labs and other professionals to respond to the issue.

There are legitimate health concerns on the issue of asbestos, but the legitimate need at the moment is for that of leadership, leadership from this committee, leadership from government to respond to leadership that I think the industry has shown.

You have my remarks. I am summarizing the key points of them. One of the things that has struck us all is that the mere presence of asbestos in a building, as the EPA reported, does not represent a risk.

I will take the remaining few minutes and talk about our own experience.

As I said, I am the president of a management company which has approximately 8 million square feet of commercial space in the United States. Almost five years ago, I initiated a research project looking at the issue of asbestos, what to do with it and what was the long-term future of the problem.

On the advice of members of the Harvard School of Public Health and others, we commenced a program to assess all the asbestos in buildings under our control and determine a master program for each property. The response was fairly simply in our case.

Where it was not to be damaged, it was to be monitored. Workers were to be trained about how to work with it. Where it was to be disturbed in a serious way, it would be removed first.

We have stayed with that process space by space, never with anything rash, never with anything that couldn't be controlled. Last year at this time, because of the marketplace pressures that seemed to argue for a speeded up and hurried up and accelerated process and for one that involved many financial sources suggesting that they would not refinance properties that had any asbestos and sources that would not continue to finance the exchange of properties, we brought together a panel of experts, including professors from Harvard and Brown, to look at the issue of low level exposure to asbestos, to look at the issue of asbestos in office buildings, especially ours, and to assess what we had done over the preceding three years.

The committee's response after eight months was that the goal for office buildings in this country should be one of what we call essentially background, that stable asbestos in place out of the way from disturbance produces as safe an environment as the environment. So, if air quality testing produces information that suggests that the air quality in a property is the same as the air quality in the environment that you have an essentially background situation.

That achieves a level of asbestos in the environment that is almost asbestos free. It also removes from being a major threat the issue of an accelerated removal program, as I said before, that severely stresses and tests all the infrastructure that really isn't there.

I found it was interesting that this was a hands off assessment and their response, as I said, was that given the nature of asbestos, given its stability, the most appropriate response was that it should be left in place and aggressively managed. Where it was to be disturbed, it should be removed by professionals.

That process can take as much as 15 to 20 years. It means that some buildings will never be, in the purest definition, asbestos free, but it produces the safest possible environment.

I have concluded. Thank you, sir.

Senator BAUCUS. Thank you very much.

Our next witness is Mr. Carlson.

STATEMENT OF STEVE CARLSON, EXECUTIVE DIRECTOR, CALIFORNIA HOUSING COUNCIL, INC.

Mr. CARLSON. Mr. Chairman and members of the subcommittee, my name is Steve Carlson. I am an attorney and executive director for the California Housing Council which, as the National Realty Committee is for commercial, we are for residential an association of the largest owners, developers, and managers of apartments in the country. I am also testifying on behalf of the National Multi Housing Council, a Washington, D.C. based analog of ours with whom we share many common members and concerns.

Although our primary focus in California has been mitigation of restrictive rent control laws, asbestos has loomed as an equally threatening issue to the health of the real estate industry and one

which we are taking a very hard look at. We certainly acknowledge the need for and recommend steps and procedures to prevent fiber releases, much as was suggested by previous witnesses, but we believe that sort of an over-zealous but well-intended approach could be counterproductive at best and potentially disastrous.

From our perspective, this is a housing as well as a health issue, and we believe it needs to be approached as such.

Market factors have spurred our look at this issue—lenders and buyers avoiding properties with asbestos, lessees of owning property, and liability insurance exclusions for asbestos pollution claims. By the way, California case law holds apartment owners to a standard of strict liability, so that is an extremely significant concern for people who own property in that State. Of course, we also have the desire to provide a continued safe and comfortable environment for our tenants.

Another issue which is affecting our look at it in California is something called Prop 65. This is a citizen sponsored right to know initiative where if one is exposing another to a chemical known to the State of California to cause cancer, you have to provide a "clear and reasonable warning" of the existence of that chemical.

Senator CHAFEE. Is that the law now? Was that passed?

Mr. CARLSON. Yes, it was passed in November of 1986 and was implemented. The deadline for warnings, if warnings are required, was February of this year.

Given all these factors, we assembled a task force of members, environmental council, industrial hygiene, and medical risk assessment experts to attempt to frame a response. Our response was our asbestos information guide, a copy of which we have provided to the committee, and I think it was the genesis of our being invited to look at here.

I think that the approach we have taken is one that, in a kind of interesting way, serves the concerns and needs of industry, government, and the public in a way that doesn't happen often in public policy. We began with the assumption that AHERA which is the basic body of law in the area is not an unreasonable approach to dealing with the issue. We suggest inspection. We suggest operations and maintenance programs to deal with the presence of asbestos.

Even more so than in commercial buildings, the dislocation of tenants and the difficulty of removal, apart from the health ramifications of removal, with tenants in place who don't vacate whole floors at a time is really mind boggling in the residential context. Our main thrust is grounded, as is AHERA, in the concepts of knowledge and communication.

Right now, since a lot of owners see only negative consequences flowing from asbestos being present, a lot of them are sort of avoiding dealing with the issue. It is the see no evil approach. If they don't inspect, then they don't know, and they don't have a problem. We, of course, counsel against that, but I think it is something that has to be taken into consideration in public policy.

We basically are going to be recommending a program of voluntary compliance along the lines that we are suggesting in our asbestos guide and generally along the lines of AHERA with incentives to encourage owners to take the reasonably simple steps nec-

essary to prevent episodic disturbances. In most well maintained buildings, that is really the goal of an asbestos program in a non-occupational setting. You prevent the material from being disturbed as long as it is in reasonably good shape.

We suggest a comprehensive operations and maintenance program be entered into with inspection and covering issues such as worker training and protection, work products, fiber releases, and the like. We part company with AHERA on a couple of issues of periodic inspection. We don't think probably the frequency of periodic inspection is as necessary in a structure that doesn't get the abuse that schools do.

We have done focus groups with tenants in which we deal with the very important issue of keeping these people in your apartments which is extremely important. Our conclusions are that full disclosure with the tenant and your employees is extremely important as you are going through the process of inspection and monitoring of the issue.

We believe a quantitative standards, if one is going to be determined, needs to be reasonable and practically detectible, but we do believe that the approach on this issue and the best way to deal with it is a voluntary program of inspection and operations and maintenance. In California, many of our members—100 or so of the largest apartment owners in the country, not just California—are doing this.

It is working, but, again, these are people who have the assets and the capabilities of doing this. Any public policy has to run the gamut of the whole industry, and that industry also includes average owners who own like 12 units on the average.

A program tailored to be within the practical reach of all property owners that encourages with incentives rather than mandates compliance, we think, is one that probably has the best possibility of implementation. Of course, those incentives deal with the issue of civil liability and the issue of lender and buyer reluctance to deal with the issue. We don't think this should be shunned.

Senator BAUCUS. Would you please summarize?

Mr. CARLSON. I have concluded my remarks.

Senator BAUCUS. Thank you.

Our final witness on this panel is Mr. Michael Shehadi of Charles E. Smith Companies.

STATEMENT OF MICHAEL T. SHEHADI, GROUP SENIOR VICE PRESIDENT, CHARLES E. SMITH COMPANIES

Mr. SHEHADI. Mr. Chairman and members of the subcommittee, I am Michael Shehadi, Group Senior Vice President of the Charles E. Smith Companies here in Washington, D.C. I am also a member of the Building Owners and Managers Association. I am also the Vice Chairman of BOMA's Environmental Task Force and their National Advisory Council.

I would like to begin by commending you and your subcommittee for scheduling this hearing and express my appreciation for the opportunity to address you today.

BOMA shares your concern about asbestos in buildings, particularly as it relates to the health and safety of our employees, our

tenants, contractors, and the general public. BOMA is the largest and oldest trade association representing the office building industry. We have 100 federated associations in the United States, Canada, and around the world. We have 6,800 members who are office building developers, owners, and managers who own or manage 5 billion square feet of office space in North America.

The problems surrounding the asbestos issue encouraged BOMA to choose a realistic and proactive stance. In April of 1987, our association proposed legislation to clarify the issue of asbestos in office buildings.

The BOMA initiative, entitled the Asbestos in Buildings Act, talked the issues associated with the abatement of asbestos in buildings and placed our association firmly in support of Federal standards in this area. Like BOMA's Asbestos in Buildings proposal, the Baucus and Stafford bills include contractor accreditation, inspection and management plan requirements, and a grandfather clause.

In addition to these provisions, BOMA continues to stress the need for the following additional provisions to be considered as part of any new or revised Federal effort in the asbestos debate:

First and foremost, the EPA should be required to conduct a scientifically based study on the real health hazard, if any—and I stress "if any"—associated with low levels of asbestos exposure in office buildings. Such a study should provide clear standards for determining when asbestos-containing materials pose a risk and should be removed and when they pose little or no risk and should be left in place.

There is absolutely no evidence which suggests that the mere presence of asbestos in a building poses potential hazards to tenants and employees. Indeed, even of the cases in where hazardous friable asbestos is present in a building, research indicates that unless it is disturbed and entrained into the air, the potential health consequences appear to be negligible. The EPA tells us that unless or until circumstances warrant its removal, asbestos can be managed in place.

A very recent Canadian study which appeared in the August, 1988 Canadian Journal of Public Health concluded, "The likelihood that a single case of cancer would develop among workers housed in a building as a consequence of exposure to asbestos is very low and probably close to zero."

After months of discussion, BOMA and others were able to secure Congress' and EPA's help in initiating a long overdue study on the health effects of exposure to asbestos in buildings. BOMA, along with our colleagues in the Real Estate Industry Working Group, are currently working with the EPA and the Health Effects Institute to secure financial commitments from private sources and help in defining the parameters of the asbestos research project.

Secondly, on the issue of clearance levels, BOMA believes that post-abatement airborne asbestos levels should not exceed the EPA guidance of 0.01 f/cc for PCM or the AHERA guide regulations statistically averaged 0.02 f/cc for TEM. Further, if the indoor concentration of asbestos exceeds these limits after abatement but does not exceed the outdoor concentration of asbestos, the abatement action should be considered complete.

Third, on the issue of liability, our association strongly feels that once a building owner or manager has removed asbestos from a building, liability for removal from the site, transportation, and disposal should end. Instead, liability for these actions should more appropriately rest with the removal contractor and the disposal facility.

In conclusion, our members are unable to secure sufficient liability coverage to protect against law suits resulting from environmental causes. We are bearing the brunt of changes in the financial real estate market as it relates to the value of our commercial properties. Many large institutional investors are reluctant to finance asbestos-containing properties. Some lenders are refusing outright to write mortgages on buildings containing asbestos. Indeed, some investors are forcing property owners to discount the price of properties which contain asbestos. In an already tight real estate market, building owners and managers face situations where uninformed tenants are reluctant to rent.

Senators, in the 1960's, asbestos was installed for an average of 25 cents per square foot. It now costs an average of $30 per square foot to remove it. Environmental industry analysts have estimated that government and commercial property owners could spend $100 billion to remove asbestos wherever it exists.

We are deeply committed to quieting the hysterical cries for arbitrary removal of asbestos from buildings. We continue to support the provision of minimum safety standards associated with the levels of airborne asbestos found in buildings that will assure the public, tenants, and employees of a safe working environment. Safety and responsibility must prevail, not uneducated hysteria.

Thank you.

Senator BAUCUS. Thank you very much, gentlemen.

The basic question I have is whether you encourage this committee to go ahead with this bill or not, that is, whether we should continue with the bill and work with the provisions of the bill and perhaps adjust and modify it to the degree appropriate based upon some of your concerns such as the financial markets and insurance markets that are causing certain problems for commercial real estate owners, as I understand it, because of the concern about asbestos.

You are pointing out it is your view that if the materials in the buildings—if it does not contain asbestos or if it is low levels of asbestos, if the materials themselves are not disturbed, the asbestos in the air is at no higher a level than the asbestos outside and is not a significant problem.

I didn't hear any of you specifically encourage us to proceed with this bill. I did hear all of you express your concern about the problem of asbestos. Certainly, when there are episodic releases and somebody bangs the furniture against a wall or a ceiling that has friable material, that is going to be a problem.

I heard all of you say, too, that where there is no asbestos in a structure or it is not disturbed or it is low level, it is not a problem. I hear all these problems, but I don't hear many solutions.

I am wondering if, in your view, it does make sense to proceed with this bill in order to achieve a common sense and reasonable solution to try to address the problem of asbestos where it is a

problem but also to reassure folks and the industry and the markets that where it is not a problem, it isn't a problem. Shall we proceed or not? Do you support the bill or not? That is the question.

Mr. CAREY. As always, I am reluctant to recommend to the Senate a course of action, but I suggest you proceed with caution. If I may, Mr. Chairman, it is important to recognize that we face enormous problems in dealing with the condition. Believe me on behalf of myself—and I am sure I speak for others—our concern is for the health of the occupants of the building for which we have furnished construction products. We have that deep concern.

We see little avail to the people we are trying to protect——

Senator BAUCUS. I am sorry, you see what?

Mr. CAREY. We see little avail, little help of any kind, if we set loose in motion an enormous industry that is profit motivated to rip out asbestos wherever they can find it, playing on the trauma that exists as a result of previous actions. The people we are trying to protect will not be better off. As you have heard, episodic release will result from careless and improper handling of asbestos, and I address this question when I say proceed with caution.

I would love for this committee to take a hard look at where the depositories are for asbestos removed. In my own case, I am trying desperately to find out from the government agencies around the New York region where the contractors are now depositing the asbestos.

In the 8 million population of the City of New York spread over 35 square miles, so far, I have only found one lonely dump that is eligible to receive asbestos. As you know, we have tons of it to be removed. I think we better find out where it is going before we take on this program and increase the hazard of asbestos removal.

On the basis of experience, I suppose we could have acted within a week to cope with the condition at Love Canal. It has taken us several years, but we really relieved that condition by using State funds and State resources.

The same thing was true of PCB contamination of our river. We brought scientific knowledge to bear. We have spent a lot of money. We could have spent a great deal more and created a worse condition by removing PCBs and finding no place to deposit PCBs.

These conditions should be considered, too. These are part of, if you will, the progress we want to see on the bill, moving with caution, to realize we have a severe condition.

Senator BAUCUS. Any other comments or reactions?

Mr. BREITENEICHER. Not being a politician, my answer is don't proceed.

Senator BAUCUS. Well, the alternative is nothing.

Mr. BREITENEICHER. But don't not. How is that for equivocating? Having been trained by Jesuits, I can answer things that way.

The very clear cut issue is this committee's interest and involvement, evidenced in today's testimony and that which is to come, is essential to continue the dialogue and continue the discussion. The issues you have heard from some of us about the scare tactics and scariness of the marketplace is such that leadership has to come.

I think in the absence of a continuation of interest about what the legislative solution is, things will get worse. The leadership

from this committee and the Congress has to be a serious issue, ways to fully resolve it over the long haul are not yet fully evident.

The EPA should be instructed, I think, from our friends from BOMA to pursue the kind of research on low and mid-level exposure that is necessary and a furtherance of proper operations and management programs that, at the moment, are voluntary. A key ingredient from all of us in this room is that we are willing to collaborate on suggesting that this is an issue that has to be resolved in a well thought out, long term manner that in no way is going to feed anyone's fears.

Senator BAUCUS. If you want leadership, we are going to have to lead.

Mr. BREITENEICHER. And leading may be the continuation of the kind of hearings like this. I would not be in a position to support any of the legislation on the table right now, but I sure support all of the thought that you are putting into it.

Senator BAUCUS. You don't think this bill, perhaps with some modifications, will help settle the——

Mr. BREITENEICHER. Senator, the tough part is the infrastructure that we have talked about.

Senator BAUCUS. I said with some modifications.

Mr. BREITENEICHER. Maybe those are the modifications, and maybe the answer is the work that comes, but it is not going to be answered between now and February.

Senator BAUCUS. I think this country, though, wants some action as long as it is reasonable.

Mr. BREITENEICHER. Wants to know that there is a process.

Senator BAUCUS. Wants some action and wants us to move.

Mr. BREITENEICHER. Absolutely.

Mr. MILLIAN. In the Denver shopping center case, they spent something like $20 million to take asbestos out, and then they had a whole series of problems. If there had been the State legislation then that there is now to set a standard, that would not have occurred.

I think that is what we are saying. The bill does not look at the science that is available today. EPA has agreed to look at the science, and we are asking you to push that.

If that becomes part of your legislation, I think that would make it a little bit easier for us. We are now dealing with——

Senator BAUCUS. Thank you. I have to subject myself to the same time limit. Thank you very much.

Senator Stafford?

Senator STAFFORD. Thank you, Mr. Chairman.

Would each of the panelists comment on the proposal that building owners be required to inspect for asbestos and, if it is found, notify building occupants and workers of its presence and whether such a requirement without more is useful?

Mr. Carlson?

Mr. CARLSON. Senator, we are certainly recommending that of our members. So, from our standpoint, it is not getting us to do anything we are not doing already. Yet, I do have a fear that by mandating something without a concurrent general benefit to an owner is really going to get people to do it, and to enforce that kind of thing is going to be incredibly difficult.

I don't know what kind of incentives we can build in. Again, I come up with the issue of civil liability. The potential is staggering, and it is frightening. Those sorts of things, if people are doing that, then perhaps creating a rebuttable presumption that there is no hazardous condition or some benefit.

I hesitate to talk about giving benefits to apartment owners, because people generally don't want to do that, but if you can create an incentive which, in essence, puts together a public policy in which people are taking preventive action, I think that is really where we would like to see things go.

Senator STAFFORD. Thank you.

Bear in mind we are only asking you should there be a requirement to inspect for asbestos and if it is found, notify the people in the building and workers who are also employed in the building. That is all we are asking you right now.

Mr. CARLSON. There is a bill that just passed in California—and I am fairly certain it will be signed—which requires that. It doesn't require you to inspect. It says if you have inspected and you know, then you have a requirement to notify. I suspect that is going to be broadened as the years go on.

Senator STAFFORD. Governor Carey?

Mr. CAREY. Senator, from my acquaintance with you over the years, I would suggest you don't want to put in place a huge system of Federal bureaucrats going around checking on the inspection of buildings. I think it is below the role of the Federal Government.

I would say with scientific guidance on low level and high level exposures to asbestos, you can set a standard for abatement. I would then suggest you leave to the State and local governments the employment of the proper inspection to safeguard the lives and well-being of the people within their jurisdictions. I don't think you are talking about launching a Federal check-up inspection system with penalties and so forth.

I think if you will help set the standard that is reasonable which will protect the public health then leave it to the States to support those standards.

Senator STAFFORD. Thank you.

Mr. Breiteneicher?

Mr. BREITENEICHER. Agreeing with the gentlemen to my left in everything they have said, I will just say as one who did what you asked, I have trouble disagreeing with that. I would find what I have found in discussing it with others in the industry, and that is what we have been doing, is making the determination, creating the rules, the protocols for how to deal with it, and notifying tenants. Whether that is a mandatory issue or not, I worry about how it is to be regulated, monitored.

It is prudent to do that. It is wise to do that, and I was very pleased with the results in our case.

Senator STAFFORD. Mr. Shehadi?

Mr. SHEHADI. Senator, I think it is appropriate to determine exactly where the asbestos exists within a building. If the asbestos is in the mechanical plant or it is physically in spaces that are not occupied by tenants, that is a different situation than if it physically is available to be contacted by the tenant.

To label or brand a building as this building contains asbestos and put a sticker up in the lobby if you have it physically in the mechanical room, I think, is a little bit of overkill. I think it is important to distinguish where it physically exists and the presence of danger that it would in fact pose.

Senator STAFFORD. Mr. Chairman, I may have one or two more questions, that I will ask in writing.

Senator BAUCUS. Thank you, Senator Stafford.

Senator Chafee?

Senator CHAFEE. Thank you, Mr. Chairman.

Is there evidence that occupants of buildings have suffered from disease related to asbestos? In other words, we all agree that shipyard workers where they were installing it and stirring it up and people were totally unaware of it suffered. But what evidence is there—and I just don't know the answer to this question—what evidence is there that people have suffered from exposure to asbestos in homes or apartment buildings or places of work?

Mr. SHEHADI. If I may answer that, Senator——

Senator CHAFEE. Yes.

Mr. SHEHADI. I don't believe there is any evidence that any particular situations have occurred because of occupancy in a building, residential or commercial, because of asbestos. It is because of that that I think the response should be proportionate to the risk.

In the public's mind, asbestos is a dirty word. It has the same connotation as toxic waste. Educated people know that that just simply isn't true. That is why——

Senator CHAFEE. Well, I am sure we are going to get testimony in rebuttal.

Let me ask you this. You mentioned or Governor Carey did that asbestos was installed in the 1940's and the 1950's.

Mr. SHEHADI. 1972 is about the last time it was——

Senator CHAFEE. When was it first used in buildings?

Mr. SHEHADI. I would have to say in the 1920's.

Senator CHAFEE. In the 1920's?

Mr. SHEHADI. In the 1920's or 1930's, yes.

Senator CHAFEE. So, presumably, we all grew up in buildings with asbestos around the heating pipes.

Mr. SHEHADI. That is correct. It was in all the schools that all of us went to.

Senator CHAFEE. We all went to schools where there was asbestos.

Mr. SHEHADI. Without any abatement plans or any knowledge of the danger, I might add. Now, there is an understanding of what really has to be looked at. Inspection of buildings is much more sophisticated today, and monitoring of levels in the air is also there.

Our position is that the EPA must be directed to determine the risk, and that is really where our industry is coming from. Determine what the risk is and then educate the public as to what the risk is.

Senator CHAFEE. You mean you would have EPA set standards, in other words, X amount of friable material in the air is dangerous and Y amount is safe.

Mr. SHEHADI. That is correct. We want them to first of all determine the risk. Look at the history of civilization within buildings

that contain asbestos and then to determine levels of safety. Once we know the answer to that, then appropriately address the response actions that are appropriate to the risk.

Senator CHAFEE. Do I understand from the testimony of Mr. Howard that he cites IBM and AT&T and the Federal Government that will not lease space in a building that has any asbestos in it?

Mr. SHEHADI. That is not true. That is their published policy. We are the largest landlord to the government, my professional firm, and we lease maybe 5 or 6 million square feet to the government. They also look at where it is. If it is in the mechanical room which is where the predominance of locations is, they do take that into consideration.

Senator CHAFEE. If a new building is built today, for instance, the Hart building was just built recently, would that building or another new building contain zero asbestos?

Mr. SHEHADI. Probably zero if it is built after 1972 to 1975. There was a window in there when some materials were still available, but new buildings today do not contain asbestos.

Mr. CARLSON. Senator, we had an interesting situation because we are inspecting our properties. We recommended that every property be inspected, new or old. To the dismay of one of our owners who has seven of his major projects built within the last two years, they determined that there had been asbestos used in the spray-on ceiling materials, and it was something that was a shock to them. Of course, they are now talking to the subcontractor to see how that happened, but it slipped through and it occurred.

It is a low level. It is intact and all that, but he had thought that they were certainly asbestos free. They inspected and determined that in fact there was some asbestos.

Senator CHAFEE. W.R. Grace, I presume, your building materials that you build now, uses no asbestos?

Mr. CAREY. Grace no longer manufactures building materials using commercially added asbestos.

As far as being "asbestos" free, trace amounts of naturally occurring asbestos contaminants may be present in minerals like vermiculite which are used in some fireproofing materials, so we can't say absolutely none. We don't deal in absolutes. We have come to a point here where we need scientific guidance as to exactly what we have here.

Senator CHAFEE. What is your substitute for the fireproofing materials?

Mr. CAREY. Among others, structural concrete. With that you increase the construction cost of the building and a good deal more expense is involved. In buildings where structural steel is deemed advantageous, a combination of fiberglass and hammer-milled newsprint replaces asbestos in fireproofing.

Senator CHAFEE. What do you wrap pipes in?

Mr. CAREY. Asbestos is no longer used for pipe wrapping.

Senator CHAFEE. What is used for pipe wrapping?

Mr. CAREY. Plastic pipe and different kinds of pipe don't require that kind of insulation any longer.

Just a point if I may, Senator, on the whole question. One of the reasons that people are reluctant to lease and are reluctant to move near buildings that in any way, shape, or form contain asbes-

tos is that they may be exposing themselves to legal liability later on when someone will bring an action because somebody was in this building on the notion that there could be a psychic injury to someone who is afraid because of what I will characterize as asbestos trauma. You have distinguished forebears whose books I have read in law. I am sure that you are familiar with psychic trauma.

Senator CHAFEE. Well, this is extremely interesting, Mr. Chairman. You get into the whole business of taking asbestos out and stirring it all up. Somebody was mentioning the effect on low income housing where you raise the cost of the building. It is a complicated field, much more complicated than I thought when I got here this morning.

Thank you.

Senator BAUCUS. It reminds me of a conversation I had this morning with Robert Strauss, one of the Commissioners of the National Economic Commission, who, in effect, said that he knew recommending a solution to the deficit was going to be difficult, but if he had known how difficult it was, he would not have taken his job.

Thank you very much, Senator. Thank you, panelists, for your help.

[A letter to Senator Chafee from Mr. Carey follows:]

GRACE

Hugh L. Carey
Executive Vice President

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November 1, 1988

The Honorable John H. Chafee
United States Senate
Washington, D. C. 20510

Dear Senator Chafee:

During the Subcommittee on Hazardous Wastes and Toxic Substances hearing on the control of asbestos-containing materials in public buildings on September 27, you asked two especially thoughtful questions:

1) "Is there evidence that occupants of buildings have suffered from disease related to asbestos?"; and,

2) "What evidence is there that persons have suffered from exposure to asbestos in homes or apartment buildings or places of work?"

The answer to both questions is that there is no scientific evidence of any increased incidence of asbestos-related disease in building occupants as a result of exposure to asbestos-containing materials in buildings. The World Health Organization (WHO) considered these questions in a 1986 report entitled, "Asbestos and Other Natural Mineral Fibers." In evaluating the exposures and risks to the general population (as opposed to occupational or worker groups and "para-occupational" groups, i.e., spouses or children of asbestos workers), the WHO report concluded:

> In the general population, the risks of mesothelioma and lung cancer attributable to asbestos cannot be quantified reliably and are probably undetectably low. Cigarette smoking is the major etiological factor in the production of lung cancer in

> the general population. The risk of asbestosis is virtually zero. (Emphasis added.)

More recently, a French study, conducted by the Institute of Medicine in Paris, examined 828 persons who had worked for at least 15 years in asbestos-insulated buildings. The principal investigators, Doctors Cordier and Ameille, concluded:

> the cross-sectional survey of a population exposed to indoor air pollution by asbestos did not reveal any pathological manifestation in relation to this environmental exposure, although it was sufficiently sensitive to show pathological effects in relation to occupational exposure within the same population.

As encouraging as the French findings are, the 15-19 year observation period for this study limits the long-term definitiveness of its conclusions.

Excerpts from the WHO report and the French study (in its entirety) are attached.

Absent empirical evidence or risk in the general population, many expert scientific groups and individuals have mathematically estimated the risks from exposure to asbestos inside buildings. These estimates are reviewed in the attached paper, "Predictions of Risk to Human Health from Exposure to Airborne Asbestos in Schools: A Review," prepared by Dr. Kenny S. Crump of Clement Associates. Dr. Crump is a nationally regarded biostatistician and risk assessment expert who has served on Environmental Protection Agency, Occupational Safety and Health Administration and National Academy of Sciences panels. As the article points out, the asbestos risk estimates made by EPA, the Consumer Product Safety Commission, the National Academy of Sciences and himself are all in reasonable agreement. More importantly, when these numerical estimates of risks are compared with risks from activities with which people may be more familiar, they are not significant.

I hope that you will enter my response to your questions in the Subcommittee hearing record.

I sincerely appreciated the opportunity to testify before the Subcommittee and personally pledge the support of W. R. Grace & Co. to assist you and the Subcommittee in the formulation of a sound public policy that will protect building occupants.

Sincerely,

cc: The Honorable Max S. Baucus, Chairman
Subcommittee Members

Senator BAUCUS. Our final panel consists of Mr. Robert Navratil, Vice President for Construction and Capital Programs for RREEF Funds; Mr. H.L. Van Varick, Executive Vice President for American Savings Bank in New York and representing the Mortgage Bankers Association; Mr. James Golden, International Representative of the Sheet Metal Workers International; and Don Elisberg, Counsel for the Laborer's Union International of the AFL–CIO.

Mr. Navratil, please proceed.

STATEMENT OF ROBERT NAVRATIL, VICE PRESIDENT, CONSTRUCTION AND CAPITAL PROGRAMS, RREEF FUNDS

Mr. NAVRATIL. Good morning. My name is Robert Navratil. I am the Vice President of Construction and Capital Programs for The RREEF Funds, a real estate pension fund. We own shopping centers in 25 States. I am here today representing the International Council of Shopping Centers, and I am on ICSC's Environmental Issues Task Force. I also sit on the Environmental Task Force of the National Realty Committee and assist the Building Owner's and Managers Association in some of their activities in environmental areas.

The ICSC has over 24,000 members and represents virtually all of the 30,000 shopping centers in the U.S. today. We have four points we would like to make. For the sake of not repeating much of what you have already heard from other witnesses, I am going to these issues, because I agree with almost all of what the panel members have said on some of these issues.

First of all, we recognize that there is a potential health problem, and we are committed to dealing with it. I am here today because of my personal experience. I was the one who directed the activities in Denver at the Southglenn Shopping Mall. I have had first hand experience not only with the efforts to clean up as asbestos but also relates with operations and maintenance programs and abatement programs. I have been in containment, I have worn the respirators, and have hands-on cleaning and abating experience.

First of all, I feel that current AHERA practices and policies that are being proposed for commercial buildings are counterproductive. The pressure is to remove asbestos from all buildings. The pressure comes from tenants who are likely to demand removal or else won't lease space in your building, from lenders who don't want to set asbestos standards in loaning money to people because of fear of law suits later on, and from the uncertainty within the health community of the health risks and lack of guidance by the EPA.

Also, there is the uncertainty of economic costs. We have heard removal costs that range anywhere from $50 to $100 billion, as the potential problem. We are faced with a dilemma, as Senator Chafee said just a few minutes ago.

Extending AHERA to all commercial buildings is something I am quite concerned about. I have dealt with AHERA. I have dealt with the accounting procedures, and I think there are still too many unanswered questions. I think we need to evaluate these effects prior to extending these rules to commercial buildings.

The EPA must take some action to solve the problems of managing asbestos in buildings, considering the types and sizes of asbestos fibers as well as exposure levels. I have monitored buildings prior to, during, and after operations and maintenance procedures. I have monitored buildings prior to, during, and after abatement procedures. I can assure you these procedures can be done safely.

What is happening today? Again, as I found out in Colorado, there are a lot of things happening. One of the things that we have is a situation of uncertainty with consultants. We hired a reputable consultant. We took samples. They assured us there was no asbestos in the mall. However, subsequent tests showed that there was asbestos-containing material even though in those tests, there were discrepancies within them.

We undertook a lengthy process to clean the mall. There was three months of closure for some stores, and several small businesses went out of business.

What did we learn? I learned about the "one fiber" theory. I learned about where the presence of asbestos is. I learned that there are 8,000 products that contain asbestos. I learned that you can buy products today that have asbestos. I learned that the substitute materials that we are using for replacement do contain asbestos regardless of what anyone says. There is naturally occurring asbestos, and you cannot hide from it.

I have also learned the uncertainty of the real health risks of low levels of exposure. The lack of standards creates uncertainty. The best way to handle uncertainty is conservatism.

I learned how clean is clean. We spent millions of dollars destroying clothing even though our tests conclusively showed that the clothes that we were dealing with in the mall were as clean as clothes that were sampled from outside our mall.

You have to understand where the asbestos comes from. It comes not only from the store that it is sold in, which may have relatively low asbestos. Clothing may be manufactured in areas that have high concentrations of asbestos, and it may be transported through and handled in areas that may pick up asbestos contamination.

I also learned that AHERA "aggressive air sampling" clearance procedure is very uncertain. When we went to clean the stores and test the stores, aggressive air sampling blew dust or fibers from this clothing into the air, and we had a significant cleaning problem. Had we had a standard, something to shoot for, and not always worried about that last fiber, I think we could have made significant progress and assuaged the health and environmental concerns that we were confronted with.

Let's determine what problems exist with regulations before we just blatantly adopt them. We want the EPA to effect a research program. We want to know what the effects of low level exposure are.

Our tests show and the EPA tests show that the ambient conditions of asbestos in buildings with asbestos, even where the asbestos is in a damaged condition, are less than or equal to the ambient conditions outside. Let's study what replacement materials should be used. Let's not remove asbestos and come back with mineral wool or other products which may have a similar health hazard. Already, fiberglass is being looked at as a potential problem.

Let's look at a clearance limit as being the only objective standard for determining an acceptable risk level compares to everyday risks. We need to do this, and we hope that you will support us on this.

Thank you.

Senator BAUCUS. Thank you very much, Mr. Navratil.

Unfortunately, I have another commitment that I must attend to. I will have to leave now. Senator Chafee will continue to chair the hearing.

Thank you very much.

Senator CHAFEE [acting chairman]. All right, Mr. Van Varick, please proceed.

STATEMENT OF H.L. VAN VARICK, EXECUTIVE VICE PRESIDENT, AMERICAN SAVINGS BANK

Mr. VAN VARICK. Thank you, Mr. Chairman. My name is H.L. Van Varick. I am Executive Vice President of the American Savings Bank in White Plains, New York. I am Chairman of the Environmental Subcommittee of the Income Property Committee and a member of the Legislative Committee of the Mortgage Bankers Association of America.

MBA is sensitive to and concurs with the subcommittee's objective in investigating this issue and the objectives of those members sponsoring the asbestos information and public and commercial buildings legislation. We also believe protection of human health from the hazards associated with asbestos is an important goal.

Our members are committed to exploring this issue through technical and scientific research and have already contributed funds to a joint EPA-private sector study to address asbestos in public and commercial buildings. We are hopeful that this research will provide better information on airborne asbestos levels and health risks.

We are primarily lenders who become owners by default. We provide the permanent and renovation financing for properties and serve as the probable source of financing for abatement actions that require significant expenditure of funds.

Many lenders have been requiring, as part of their mortgage loan underwriting, environmental assessments. Response actions undertaken as a result of these investigations vary widely in form and scope.

The present situation in the New York City metropolitan area where American Savings Bank is based may help the subcommittee to determine the approach and the timing of Federal requirements.

The real estate market in New York is increasingly demanding that asbestos in commercial properties be abated or removed. Such efforts are undertaken every day.

A 1985 New York City law provides that renovation or demolition projects which disturb asbestos must be conducted in accordance with procedures established by that law. Workers who handle materials containing asbestos receive appropriate training. While these laws are clearly in the public interest, a lack of competent personnel is a very real problem, and the system is stretched to its limits.

The City of New York Department of Environmental Protection recently studied in-place asbestos in public buildings. In September, they announced that most of the asbestos-containing material, ACM, in poor condition was found in areas that were generally inaccessible to the public. Of the buildings containing ACM in surfacing materials, only 1 to 4 percent was in poor condition.

When New York City Department of Environmental Protection Commissioner Schultz presented the findings of the study, he indicated "asbestos presents a health risk when it is disturbed or in a deteriorated condition, allowing the release of fibers which can be inhaled." He also indicated that "the precipitous removal of all asbestos would cause the unnecessary disturbance of that asbestos which is in good condition, creating a significant risk where there is currently little or none."

We urge the subcommittee to reflect on the experience of the schools with the Asbestos Hazards Emergency Response Act, including the recent need to extend the inspection deadline. We also urge the subcommittee to note that school buildings are vacant part of the year while office and apartment buildings are not. Further, the use of these facilities and their occupants differ. Finally, these Senate bills, unlike AHERA, provide no financial assistance.

The bills before the committee would require the Federal Government to focus attention on the problem of asbestos in public and commercial buildings through inspection, abatement, and monitoring. We believe inspections are presently occurring throughout the industry, but response actions vary. Consequently, MBP believes industry-wide and public education campaigns to provide information on appropriate abatement techniques is the most beneficial course of action. MBA is presently evaluating the appropriate mechanism for its own members to meet these goals with regard to asbestos.

We hope that the subcommittee focuses its effort on development of more instructive information with respect to ACM's such as airborne levels of asbestos. We hope that, should the subcommittee instead choose to require EPA to propose standards, they would:

be reasonably related to the potential health risk and reflect identifiable needs for hazard abatement or hazard reduction;

incorporate a sensible balancing of the costs imposed on tenants and owners with the benefits derived from compliance with the guidelines or standards; and

reflect the availability, effectiveness, and cost of both technology and trained personnel to perform inspection and/or abatement functions.

We look forward to working with the members of the subcommittee and the committee to address these issues in the coming Congress.

Senator CHAFEE. Thank you very much.

Our next witness is Mr. James Golden.

STATEMENT OF JAMES GOLDEN, INTERNATIONAL REPRESENTATIVE, SHEET METAL WORKERS INTERNATIONAL ASSOCIATION

Mr. GOLDEN. Thank you, Mr. Chairman.

In my testimony forwarded to the committee last week, I referenced in a footnote that I had just received a copy of OSHA's final rules on management for the asbestos standard setting an excursion limit for construction and general industry. Having had the opportunity to review this work, I would agree that it may bring many more workers under the asbestos standards protection who were previously thought to be at little risk.

We have constantly argued this point, and it now appears, with the help of Chairman Gaydos and others, that our concerns are being addressed.

I would like to quote but a few paragraphs from this 20-page report to highlight how these changes strongly suggest that the road to protection lies in early warning.

One, employees under the current standard are being exposed to asbestos at concentrations that present a significant risk of adverse health effects.

Two, OSHA concluded in the feasibility analysis in the revised asbestos standard that workers who actively disturb these materials will probably require respiratory protection.

Three, OSHA estimates that under the current asbestos rule, at least 36,000 workers remain unprotected from fiber levels above the 1 f/cc new excursion limit.

Four, OSHA's contractor noted that, as in asbestos abatement, exposures in renovation vary tremendously, depending on the materials and the nature of the work being performed.

Five, the intent of OSHA's regulated area requirements is to protect employees from unknowingly entering areas where their exposure exceeds either PEL. They will be warned of the need to wear respirators and to keep out if they have no need to be present.

Six, additional expected benefits should appear in the form of reduced worker disability from asbestos and a reduced incidence of asbestos-related disease in groups outside the directly exposed work force. Office workers and the general public in commercial buildings will also benefit from signs alerting them to the hazards in the work site. This is in the new OSHA standard, Mr. Chairman.

Much of this standard addresses additional and improved monitoring on the job sites with follow-up medical monitoring. Although it is a substantial improvement, this revised standard still depends entirely too much on the monitoring of employees during the exposure period.

The missing link is the legislation being discussed here today. I cannot impress on you strongly enough how important the prior warning provided by S. 981, S. 1809, and S. 2687 is to our members and also to those in the work places we service and, in many instances, to the general public.

It is not at all uncommon under present conditions to have building owners, managers, and others not to voluntarily bring forward the information of toxic and/or hazardous substances present in the work place. I believe that the basic information this legislation will bring forward will provide the protection that all of those present in these structures deserve.

I urge this legislation be reported out of committee favorably and that it should involve all structures to which the public has normal access.

Thank you, Mr. Chairman.

Senator CHAFEE. Thank you, Mr. Golden.

Mr. GOLDEN. By the way, Mr. Chairman, I have quite a few copies of that revised statement available for the committee and the public.

Senator CHAFEE. All right. Thank you.

Mr. Elisburg?

STATEMENT OF DON ELISBURG, COUNSEL, LABORER'S INTERNATIONAL UNION OF NORTH AMERICA, AFL-CIO

Mr. ELISBURG. Senator Chafee and members of the subcommittee, my name is Donald Elisburg, and I am appearing here as counsel for the Laborer's International Union of North America. With me is Donald Kaniewski, legislative representative for the union.

We have provided a detailed statement of our views to the committee, and we ask that it be included in the record. I will summarize the statement.

LIUNA strongly endorses the efforts of the subcommittee to deal with the serious danger of asbestos exposure to the occupants of Federal and commercial buildings, to the workers engaged in asbestos abatement and demolition work in these buildings, to the workers engaged in maintenance activities in these buildings, and to the general public.

The union has this strong interest because it is our members and their families who are at high risk of harm from the dangers of asbestos. Our members confront asbestos as occupants of Federal and commercial buildings, as maintenance employees of these buildings, and as construction workers called upon to remove, repair, and encapsulate asbestos or to engage in demolition and reconstruction of the properties.

At the outset of this testimony, we wish to make clear that there is every reason to include Federal and commercial buildings in the EPA regulatory scheme for control of asbestos. The case for such action is well documented. The EPA Public Building Study released earlier this year established the seriousness of the problem and, therefore, we do not agree with the Administrator's recommendation for inaction, as we believe that the resources are available to confront the problem now, not later. There is no excuse for not taking action with respect to all buildings used by the public, whether Federal or commercial.

Today we would like to concentrate our testimony on the need for any legislation to include full and complete worker protection standards, including detailed training requirements for contractors and workers. We are very concerned that inspections and removal be done by competent and qualified persons, and we think it essential that legislation contain detailed standards governing any repair or removal of asbestos.

In this regard, S. 981 and S. 1809 contain provisions for contractor accreditation but not certification of asbestos abatement workers. We believe that any legislation must include detailed provisions for supervisor and worker training as well as that for inspectors, management planners, and contractors.

We are vitally concerned because many of our members in the past have become victims of asbestos-related disease due to the lack of adequate protection for their health when working with this deadly substance. We are currently trying to address these health needs and to ensure that Laborers working today and tomorrow will, through proper training and surveillance, not be faced with the health effects that many of our retirees and older Laborers currently experience. Simply put, we are determined not to see this situation repeated.

LIUNA has been recognized nationally as the union which performs this asbestos abatement work. In large measure, this flows from the fact that we are the craft which is chartered to perform wrecking and demolition work as well as the cleanup on construction, and we are also the craft of general workers who are employed in virtually every branch of the construction industry. Increasingly, we are being recognized specifically as the asbestos abatement worker.

One has only to read the local papers or watch television news programs to observe some of the chaos and danger presented to workers and the public from the use of untrained workers in handling asbestos abatement. We have developed a training course for workers that is presently a 4-day, 32-hour program. The course has been approved by EPA under its new AHERA regulations.

We have also developed a supervisor training program, and we are well underway in developing an inspector program. We believe the contents and requirements of this course represent the absolute minimum necessary for proper worker protection training. Frankly, we believe that in the near future we may have to consider a 40-hour course or more to keep up with the emerging technology in this area.

We are confident that we can meet a substantial portion of the demand for properly trained workers whether in schools or in Federal and commercial buildings. We think that much of the AHERA program for training, accreditation, and certification can be made applicable to these proposals. In this regard, the subcommittee may wish to take note of the recent introduction of similar legislation by Congressman Florio which contains rather specific training and certification provisions.

We would be pleased to work with the subcommittee in framing these proposals, and we will be happy to provide copies of our training materials to the subcommittee as well as to demonstrate our training program to you.

Dealing with asbestos is dangerous whether the quantities are large or small. Therefore, we believe that accreditation, training, and certification requirements should apply to operations and maintenance work as well as abatement work involving removal, repair, or encapsulation. The trend towards treating routine operations and maintenance as requiring little or no training of workers is wrong.

Mr. Chairman, the time for study is over and the time for action has arrived. Enough is known to demonstrate that the asbestos problem in Federal and commercial buildings is serious and requires immediate action.

Thank you.

Senator CHAFEE. Thank you very much, gentlemen.

I think the final points made by Mr. Elisburg about the need for the trained workers is certainly clear. Of course, the last two witnesses represent individuals who are dealing with the asbestos when it is stirred up.

Mr. Elisburg, do you have any information on health risks to which maintenance workers are exposed during the performance of routine tasks that involve contact with asbestos? Is there any experience your folks have had?

Mr. ELISBURG. I think there is. Some of the early studies that were done from Mount Sinai Hospital in New York have dealt with a job called stationary engineers. These are the people who worked in the boiler rooms and so forth in these buildings.

Their incidence of asbestos and asbestos-related disease is as high or higher than that of construction workers. And these were not people who installed. These were people who go into the maintenance work.

Virtually every union that we deal with or that we know of, and our colleagues and our own members that have been in maintenance work have members who, in effect, have become victims of asbestos-related disease, and they were not the people who were involved in building the buildings. Obviously, many thousands of those have been victims.

Yes, there is evidence in terms of the operations and maintenance work that the hazard is present.

Senator CHAFEE. Has that evidence been correlated in any form that you know of?

Mr. ELISBURG. I believe so, but I certainly would like to be able to supply something for the record.

Senator CHAFEE. If you have a chance, if you would be good enough to check on that and send it in, it would be appreciated. That would be helpful to us.

Mr. ELISBURG. Certainly. I would be glad to.

Senator CHAFEE. Thank you.

Now, dealing again with the training you talked about—and I believe you mentioned you are up to 40 hours now or 36?

Mr. ELISBURG. It is 32 hours at this point.

Senator CHAFEE. What is the best agency? Should it be the Federal Government or a State or a private organization to oversee and enforce this training requirement? Let's agree there should be training. Who is going to oversee that it take place?

Mr. ELISBURG. You have a model that I think is starting to work well in the AHERA model. It is certainly a reasonable model. That has placed the burden on State agencies to the extent they undertake to set up training and certification programs and enforcement. If the States don't, then the EPA in effect acts as the certifying program.

The Laborers' International Union has had extensive experience in working, in fact, in New England with State agencies in Rhode Island and Massachusetts and Connecticut and others very successfully in meeting their standards and having their programs approved both at the State and Federal levels.

So, it is not necessary that is has to be the Federal Government itself. I think the States that have chosen to do this regulation have been doing quite well.

Senator CHAFEE. It seems to me the quandary we have here, at least as I see it in listening to the different witnesses, is that we want to encourage the appropriate abatement actions, but we don't want to encourage unnecessary removal. Mr. Van Varick, you indicated that there is a thrust in that direction through the secondary mortgage market and other areas toward requiring that these buildings be——

Mr. VAN VARICK. That is right. That is what we are doing now. We are a very large income property lender. We have a portfolio of about $1.8 billion in income property mortgage. Being basically a New York City oriented lender, we have a lot of buildings with asbestos in them.

We have, over the years, developed some language that we require some sort of inspection. However, as all of us who are really in that business now are requiring something, when we get it, we don't know what to do with it. That is really what it comes down to.

Each one is picking a way to deal with the problem, but since we don't have any real guidance from here as to what to do with it, each one of us is making our own decisions, and we are not really in a position to make those decisions.

Senator CHAFEE. Mr. Navratil, Senator Stafford had a question that I will pose to you. You proposed that EPA be directed to solve the problems of managing asbestos in commercial buildings. That is a quote, I guess, from your testimony. And you indicate that the agency should set forth what exposure levels represent a reasonable risk based on, among other things, other risks of everyday life and the enormous economic costs.

Let's suppose that EPA comes up with this reasonable risk level. How should that be used? What are the consequences of that, and how would it help solve the problems of managing asbestos?

Suppose EPA comes up with X level is safe. Then what happens?

Mr. NAVRATIL. Well, my personal experience has been—and this is relative to the shopping mall in Denver——

Senator CHAFEE. That shopping mall experience was a searing one for you, wasn't it?

Mr. NAVRATIL. Well, I was virtually living in Denver for three and a half months, working around the clock, both cleaning, removing, and working with the EPA and State public health officials, dealing with the media, and dealing with the tenants.

Senator CHAFEE. When you mention the clothing, was that clothing in the stores?

Mr. NAVRATIL. Yes. The problem with uncertainty in this incident was that there was disturbance of materials which were thought not to have asbestos in them. There was some spurious contamination of clothing in the mall.

We sampled the clothing by developing a technique of vacuuming——

Senator CHAFEE. What do you mean by clothing? Do you mean goods to be sold?

Mr. NAVRATIL. Clothing within the stores, goods to be sold. It was thought that some of the asbestos-containing material that was disturbed in the common areas of the mall got into these clothes. We developed a protocol, which we submitted to the State public health people which was reviewed by the EPA in Region VIII, and they, in turn, approved what we thought was the original cleanup procedure.

As we got into it further, questions came up regarding some studies that Dr. Chatfield had done in Canada, which related to the fact that these clothes may have residual asbestos in them. We then developed a protocol with the EPA, which we thought was acceptable, of sampling clothes which were purchased outside the mall versus clothes which were purchased inside the mall, and our tests showed that there was no difference. As a matter of fact, in one case, there was a larger amount of contamination from goods purchased outside the mall.

The EPA then did some additional testing, and their results were inconclusive. Consequently, because of the lack of standards regarding safe levels or asbestos, we ended up having to dispose of millions of dollars worth of clothing.

Getting back to your question, we feel, after having worked with this directly, that there is a tremendous amount of prudence exercised by building owners, and would be improved if we had a standard which we could measure to, if we had a standard that we could believe in, which we knew had a scientific basis. As to the method for protecting the workers, we believe operations and maintenance plans are effective. I happen to be on a panel that will meet here on the 6th and 7th of October and work with the EPA on a national O&M guidance manual. We feel this is a very straightforward way to deal with the issues of contamination of spurious fiber release and the training of the workers.

We feel that many operations and maintenance programs are in place, and we don't feel that legislation is needed to impose those standards. The technology is there and the willingness is there among prudent building owners to make this thing happen.

Senator CHAFEE. Do you agree with that, Mr. Golden? Should we set the standard, and then we would have something to go by?

Mr. GOLDEN. No, I don't, Mr. Chairman. I don't believe there is enough protection now, and that is the reason we need this bill. We have to be forewarned.

When I hear statements that the mere presence of asbestos does not constitute a health hazard, that may well be true, but the fact of the matter is the mere ownership of a gun doesn't constitute a health hazard. It is what happens when people are around these things.

Then we start talking in our discussions about disturbing asbestos in a serious way, how do you disturb asbestos in an unserious way? I just don't understand this logic.

I hear a panel of experts being quoted earlier from Harvard and Brown. How many people from Harvard and Brown are disturbing asbestos on a daily basis? I mean no disrespect to those institutions, but what constitutes their being experts working around the hazardous product of asbestos and leaving the residue behind for the building occupants and the general public who come after us?

Were any heating and ventilating engineers or any sheet metal workers consulted by this panel of experts?

Senator CHAFEE. Do you think all asbestos should be removed from all buildings?

Mr. GOLDEN. Yes, I do, Mr. Chairman, if it is accessible to anybody in that building, including the maintenance personnel.

Senator CHAFEE. You mean the presence of asbestos by itself is dangerous?

Mr. GOLDEN. It certainly is.

Mr. Chairman, very commonly in the 1960's and 1970's, the air handling systems in most of these high-rise buildings used the ceiling area as the return air plenum. Now, if nobody is in that ceiling for two or three years, there might not be a problem.

All of those buildings, because of the very nature of the way this is installed, when you work in these buildings, the fire proofing is applied first. It is applied to the ceiling surface or the floor surface of the floor above, whatever way you want to look at it. That is applied as the first installation on that floor.

Then, after that, come all the tradesmen and electricians and carpenters to hang their lights and ceilings from these products that cannot help but be disturbed during this process. When that ceiling is closed up, all these fibers are sitting atop the ceiling tiles where they have been since that building was built in the 1960's or 1970's. Every time somebody picks up and moves one of those tiles, that asbestos is disturbed.

That will go on ad infinitum. Then it is carried through the ceiling plenum and throughout the air handling system in that building.

Senator CHAFEE. Well, thank you all very much. As I said earlier, this is a difficult situation, and we appreciate each of your taking the time to come forward and give us your thoughts. Thank you.

The subcommittee stands adjourned.

[Whereupon, at 12:28 p.m., the subcommittee adjourned, to reconvene at the call of the Chair.]

[Statements submitted for the record and the bills, S. 981, S. 1809, and S. 2687, follow:]

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TESTIMONY OF

HUGH L. CAREY
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AND

KENNETH Y. MILLIAN
VICE PRESIDENT
W. R. GRACE & CO.

ON BEHALF OF THE SAFE BUILDINGS ALLIANCE
ON THE
PUBLIC POLICY ISSUE OF
HOW TO
DEAL WITH ASBESTOS IN BUILDINGS

BEFORE THE

SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES

UNITED STATES SENATE

September 27, 1988

Thank you, Chairman Baucus, for the opportunity to share the building products manufacturer's perspective on the asbestos-in-buildings issue.

I am Hugh L. Carey, an Executive Vice President of W. R. Grace & Co., where I head the newly established Office of Environmental Policy. With me is Kenneth Y. Millian, a Grace Vice President who has been assigned to work with me in this new office. We are here today, testifying on behalf of the Safe Buildings Alliance (SBA), which is an association of leading building material companies which formerly manufactured asbestos-containing products. It's members include: The Celotex Corporation, United States Gypsum Company, and W. R. Grace & Co. Mr. Millian is the Chairman of the Board of SBA, which will also submit a statement for the record regarding the status of state initiatives.

Mr. Chairman, my testimony will focus on six basic points:

- First, the scientific evidence tells us that the actual exposure of building occupants to asbestos is typically very low -- many orders of magnitude lower than the exposures suffered by asbestos shipyard and construction workers decades ago;

- Second, removing asbestos may actually increase the risk to both building occupants and abatement workers;

- Third, it is appropriate to identify asbestos materials, to ensure a proper program of maintenance and repair and to protect those working with, or renovating such materials;

- Fourth, a national removal program based on the AHERA-approach would be a massive undertaking that could exceed Superfund in cost, without producing any health benefits and could produce negative health risks;

- Fifth, efforts to manage the fly-by-night abatement firms and the shoddy removal practices that have spread like wildfire are an administrative nightmare for cities, states and the federal government; and,

- Sixth, we need to ensure that our response to asbestos in buildings is guided by accurate scientific knowledge about the risks of various alternatives.

The domain of this Subcommittee -- hazardous wastes and toxic substances -- is familiar ground to me. As a seven-term Member of Congress from New York, I voted for many of the landmark environmental statutes -- the National Environmental Protection Act, the Clean Air Act, and the Clean Water Act. As Governor of New York, I was actively involved in all aspects of the public policy approach to hazardous waste clean-ups -- i.e., Love Canal. In 1979, three years before EPA promulgated its school inspection/notification rule and seven years prior to passage of the Asbestos Hazard Emergency Response Act (AHERA), I signed the New York School Asbestos Safety Act

to require the inspection and remediation of asbestos in New York schools.

In my role as a W. R. Grace & Co. Executive Vice President responsible for environmental policy, I plan to deal with environmental issues in the same constructive and forward-looking way.

As a consequence of being in the buildings products business, Grace, like many other companies, manufactured asbestos-containing materials. In fact, these products were specified under national and state building codes to protect human life and safety. When Grace manufactured these products, we believed then -- as we believe now -- that properly installed and maintained asbestos-containing fireproofing does not endanger building occupants. A case in point is the fact that Grace fireproofing preserved the structural integrity of a bank tower in Los Angeles during a major fire in May. After testing every steel beam, column, bolt and weld on five fire-ravaged floors of Los Angeles' First Interstate Bank Tower, the building's original structural engineers recently issued a report proclaiming the 62-story landmark "100%" structurally sound and credited W. R. Grace & Co.'s fireproofing for their positive findings.

I want to draw a clear bright line between two important concepts -- "**occupational exposure**" and "**occupant exposure**". No one disputes the legacy of asbestos-related disease left from the factories, shipyards and building construction worksites in the 40's and 50's. That was "occupational exposure". But yesteryear's asbestos factories are not today's shopping centers, apartments and office buildings. Here's what scientists in the 1980's are saying about "occupant exposure" in buildings:

- The U.S. National Institute of Environmental Health Sciences (NIEHS), summarizing building air monitoring studies, has concluded, "...the average concentrations [of airborne asbestos] in the vast majority of buildings with asbestos as surfacing material do not differ significantly from background [outdoor air]."(1)

- The 1987 study by EPA of 43 GSA buildings reconfirmed the NIEHS conclusion by finding that indoor airborne asbestos levels do not significantly differ from outdoor or environmental exposure levels.(2)

- And to put it all into perspective, Dr. William Nicholson of the Mt. Sinai Environmental Health Sciences Laboratory, and a consultant to EPA on risk assessment, recently concluded, "As environmental asbestos concentrations are 100,000 to 1,000,000 [times] less than those typically present in asbestos insulation or factory work during the 1940's or 1950's, the risk of developing an asbestos disease is 100,000 to 1,000,000 [times] lower than experienced by these workers."

- Even when severely damaged surfacing materials increase concentrations up to 100 times background

(outdoor air), Nicholson concludes, "The chances of developing an asbestos cancer...[are] generally very low and less than other risks we all face."(3)

To save time today, Mr. Chairman, I would like to enter these and other building asbestos studies into the record.

Unfortunately, the public policy actions to date have simply not addressed the scientific conclusion that high exposures to airborne asbestos fibers, rather than the mere presence of asbestos materials in buildings, are the real health problem. As Dr. John Spengler, a leading indoor air pollution expert from the Harvard School of Public Health has pointed out, the failure to make this critical distinction has, "resulted in an irrational response of removing asbestos from schools and buildings based completely on its presence".(4) The pressure to remove asbestos, even where it may be dangerous to do so, is fed by doomsday predictions from the highly profitable asbestos abatement industry.

Fortunately, EPA now appears to be willing to take a hard look at the scientific evidence and re-evaluate how best to protect the public health. The "EPA Study of Asbestos-Containing Materials In Public and Commercial Buildings", released in February, 1988, recognizes that

occupant exposures may be low, removal risks high, and recommends an ambitious research program to find better answers.(2)

Grace shares the concerns of sheet metal workers and service employees about the disturbance of asbestos materials during building upkeep. These disturbances or "episodic exposures" are both controllable and preventable through an operations and maintenance program. In addition, as you will recall, Mr. Chairman, Grace took the lead with the chemical industry in both the drafting and the lobbying for S.79, the High Risk Occupational Disease Notification and Prevention Act. In addition, Grace believes that building workers have a right to know where asbestos materials are located and should be provided with the training and equipment to protect themselves. The Occupational Safety and Health Administration's (OSHA) asbestos regulations require protective measures for many building workers. We support tough enforcement of these regulations.

Protecting removal workers is a tougher problem. A recent Fortune magazine article observed, "Removing asbestos from a tenanted commercial building is somewhat akin to having a bone marrow transplant while running a marathon." More and more scientists are beginning to

conclude that removal, rather than protecting human health, can endanger it. Studies done in the U.S., Canada and the United Kingdom have shown that removals often increase asbestos levels inside buildings -- sometimes for months -- even when the removals are done properly. (5,6,7,8,9)

Apart from the potential human toll of unnecessary removals, the costs are staggering. The clean-up costs to date for Love Canal would only pay for removal in a handful of high-rise office buildings in Manhattan.

The national price tag?:

- For schools: EPA says $3 billion; schools say $10 billion.
- For public and commercial buildings: EPA says $51 billion; removal contractors see a $250 billion market and the Buildings Owners and Managers Association has been quoted as saying the tab may be $4 trillion.

The problems that 107,500 schools are experiencing with AHERA regulations would snowball if we extended that approach to 3.6 million commercial buildings. School districts are complaining about the inadequate supply of accredited inspectors and management planners, price gouging, tight deadlines, and the lack of money. Abatement consultants say that the EPA regulations are "confusing and inadequate" with "no scientific or

engineering protocols for making the decisions."(10) EPA and OSHA officials have said that contractors routinely violate laws intended to prevent the workers and the public from breathing asbestos dust. State legislators caution, "The real threat is the potential for years of mismanagement of asbestos in schools."(11) It is this potential for mismanagement and misdirection of a national asbestos-in-buildings program that most bothers my company.

Perhaps with enough time and money, we could eventually find a way to reach the thousands of contractors enlisted in the asbestos abatement business. A more critical question is how much of the activity that creates such an enforcement nightmare is necessary to protect the public health. This country's best medical scientists are telling us that the risks of in-place asbestos are negligible and the risks and costs of tearing it out are incalculable. This country's policy "think tanks", such as Resources for the Future, are cautioning that EPA's asbestos-in-schools rule is a "misguided regulation"(12). For no other environmental issue have the dangers of <u>inappropriate</u> actions been so clear and costly.

To summarize, our experience to date tells us that:

- typical building occupant exposures are low, and pose little, if any, health risk;
- in contrast, the removal of asbestos is risky and may pose a very real health threat to workers; and,
- the abatement industry, because it is so diverse and dispersed, will be difficult to regulate.

What do we do with this information? First, we need to make sure that those working with or renovating asbestos materials are adequately protected. Second, we should take steps to preserve the asbestos material through program maintenance and repair. Finally, we need to enlist the support of scientists in a national program to review the scientific studies we have mentioned; evaluate the health risks of asbestos in buildings and its removal, tell us what additional surveys may be needed, and recommend an appropriate program.

Perhaps a blue ribbon panel comprised of the nation's leading scientific experts on asbestos could provide us with the information that we need. Both Canada and the United Kingdom have adopted this approach with great success.

These efforts require and deserve financial support from the private sector. Members of the Safe

Buildings Alliance: W. R. Grace & Co., the United States Gypsum Company, the Celotex Corporation, as well as other former manufacturers are willing to put their money where their mouths are -- to support independent research -- to identify the best available science -- to develop policies that best protect the public health. We are currently helping to finance studies in cooperation with EPA and other private parties.

As Americans, we have placed a lot of confidence in scientists, and for good reason. Science has helped us to find cures for disease, feed the world's hungry, and to better understand man's complex relationship with the natural environment that sustains us.

Today I'd like to close with these words from William Kingdon Clifford, an early nineteenth century scientific author:

> "Remember then, that science is the guide of action; that the truth which it arrives at is not that which we can ideally contemplate without error, but that which we may act upon without fear."(13)

We welcome the Subcommittee's interest in this important issue. Let us work together, to turn the bright searchlights of scientific inquiry toward finding the solutions to this complex public policy problem of how to treat asbestos in buildings.

Footnotes

1. Omenn, G., et al., "Contribution of Environmental Fibers to Respiratory Cancer", Environmental Health Perspectives 70:51 (1986).

2. Environmental Protection Agency, "Study of Asbestos-Containing Materials in Public Buildings: A Report to Congress", EPA No. 560/5-88-002 (February, 1988).

3. Nicholson, W.J., "Some Questions and Answers About Asbestos in Buildings," The Mount Sinai Medical Center (1988).

4. Spengler, J., Testimony before the Subcommittee on Environmental Protection, Senate Committee on Environment and Public Works (April 24, 1987).

5. Burdett, G., et al., " Airborne Asbestos Fiber Levels in Buildings: A Summary of U.K. Measurements," World Health Organization/International Agency for Research on Cancer Symposium (September 8-10, 1987).

6. Burdett, G., and Jaffrey, S., "Airborne Asbestos Concentrations in Buildings," Ann. Occup. Hyg. 30:-185 (1986)

7. Pinchini ., Asbestos in Buildings, Royal Commissi on Asbestos Study Series, No. 8 (1982).

8. Sebastien, P. et al., Measurement of Asbestos Air Pollution Inside Buildings Sprayed with Asbestos, prepared for Government of France, Ministry of Health and Ministry for the Quality of Life Environment (1977) (translation by Environmental Protection Agency, 1980).

9. Tuckfield, R., et al., Battelle Laboratories, "Draft Final Report on Task 27 - Evaluation of Asbestos Abatement Techniques - Phase 3: Removal" (September, 1986).

10. D'Angelo, W., Statement of the National Conference of State Legislatures to Joint Hearing before the Subcommittees on Hazardous Wastes and Toxic Substances and Superfund and Environmental Oversight of the Committee on Environment and Public Works, United States Senate, March 15, 1988.

11. Strickland, T., Statement of the National Conference of State Legislatures to Joint Hearing before the Subcommittees on Hazardous Wastes and Toxic Substances and Superfund and Environmental Oversight of the Committee on Environment and Public Works, United States Senate, March 15, 1988.

12. Gough, M., "Uncle Sam Flunks Asbestos Control In Schools", Issues In Science And Technology, Vol. IV, #3. 1988. National Academy of Sciences.

13. Clifford, W., Aims and Instruments of Scientific Thought, 1872.

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SEPTEMBER 27, 1988

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Mr. Chairman and Members of the Subcommittee:

Introduction

I appreciate the opportunity to appear before you today to share with you both my industry's concerns and efforts associated with asbestos-in-buildings and my company's particular experience in dealing with this serious challenge.

I am Joseph C.K. Breiteneicher. I am president of Beacon Management Corporation, a subsidiary of Beacon Properties in Boston, Massachusetts. Beacon Management Corporation is responsible for 8 million square feet of commercial property and 11,000 units of low-, moderate-income and elderly housing in the United States. I am here today representing the National Realty Committee on whose Environmental Policy Advisory Committee I sit. The NRC is a Washington-based organization representing the nation's developers, owners and financiers of income-producing real estate. The majority of the members of the NRC are entreprenuers, who develop, construct, manage and own, generally for their own account, income-producing real estate. I will first address generally the industry concerns, then I will provide you with an overview of one company's efforts to deal with this industry problem in what we believe to be a responsible, reasonable and appropriate manner.

Overview

Over the past several years, as public awareness has heightened, market pressure on owners of buildings containing asbestos has grown. It has increased to such a point that: many financial sources are reluctant to lend, refuse to lend or insist on indemnities before lending on buildings with asbestos; virtually no one can afford to buy independent liability insurance coverage for asbestos containing buildings; some institutional tenants (e.g., IBM and GSA) have adopted policies forbidding the leasing of space in asbestos buildings; and, many potential buyers will not consider purchasing asbestos containing buildings. These stories fuel the fear stemming from the uncertainty which surrounds the issue of asbestos-in-buildings as a serious health concern. In sum, legitimate concerns over the health effects of asbestos in the environment have unfortunately served to create an unthinking and unsubstantiated level of fear for the public's safety in office buildings, a fear, upon closer scrutiny, with little or no basis in reality but a fear that has put a significant portion of this country's built environment at unnecessary economic risk. Further, public anxieties and the resultant market pressures have caused a most counterproductive condition--the hurried-up removal of stable asbestos from non-school buildings which can lead to the release of asbestos fibres in the air, claim valuable dump site space that may be needed for more critical disposal demands, and stress significantly the fledging asbestos abatement industry.

After working closely with this issue for almost 5 years, I believe the industry, as represented by the NRC, to be committed to measures necessary to ensure a "safe building environment." We in the industry who own and manage buildings understand that asbestos, like many other challenges or potential problems, must be actively managed. We are also aware that in order to best manage asbestos we need protocols for working with asbestos to ensure the safety of our workers, employees and tenants. We need your help in further defining the appropriate protocols and in setting forth a federal standard for dealing with asbestos-in-buildings. But most of all we need your leadership to calm the public's fears and to collaborate on a business-government process creating the scientific and operational basis for a regulatory and legislative framework that will ensure office buildings as safe environments for all. While we are not prepared today to provide a full endorsement of any currently pending piece of legislation, we do commend these efforts and urge the sustained interest of the subcommittee in this crucial area and pledge to be available to work with you to create a safe and practicable solution to this problem which concerns us all.

Background

In the mid-1970's the EPA banned the use of asbestos for insulation, fireproofing and soundproofing due to the potential health hazard presented by exposure to the substance, even though for many years prior to that building codes often required its use due to its particular capabilities. Although it has become recognized and accepted that deteriorating asbestos, which can create a high level of airborne asbestos fibers, requires abatement (often by removal), removal of all asbestos containing material (ACM) is not usually a necessary or preferable response. In fact, indiscriminate removal can often be more harmful than inaction; whereas, an effective operations and maintenance plan currently seems to be the all-around most desirable method by which to deal with the existence of asbestos. Indeed, the Environmental Protection Agency (EPA) in its 1988 report to the Congress entitled, "EPA Study of Asbestos-Containing Materials in Public Buildings" acknowledged that the mere presence of asbestos does not pose a health risk to building occupants. In fact, it was largely due to the lack of definitive data concerning the health effects of exposure to asbestos by building occupants that the EPA recommended in that report that no congressional action currently be taken in this area.

We applaud the EPA's desire to establish the true health effects associated with asbestos exposure. It is inevitable though that until responsible federal guidelines for building owners are established that market pressure on building owners to take some sort of action with respect to income-producing property built with ACM will continue to grow. The action likely to be prompted by the pressure could well have unfavorable results for all concerned absent more concrete guidance from our

federal policy makers such as those of you who serve on this subcommittee. In addition to the establishment of federally sanctioned protocols for the inspection and operations and maintenance procedures necessary to appropriately deal with asbestos-in-buildings, there must be a willingness to pursue the next logical steps in coming to terms with this issue, including training and licensing of workers, disposal of asbestos once removed, as well as insurance and liability. Although the "Asbestos Hazard Emergency Response Act" (AHERA) was an admirable attempt on the part of the Congress to address the asbestos problem in schools, without considerable refinement we do not embrace it as a wholly appropriate solution for commercial buildings.

Beacon's Experience

In lieu of federal requirements, most, if not all, of NRC's companies have implemented operations and maintenance plans tailored to their properties. I would like to share with you the work we have done in this area at Beacon.

In 1983, after having earlier encapsulated some of the ACM in our properties, we commenced a more thorough analysis of the issue, beginning with broad advice from public health experts, industrial hygienists and researchers and concluding with a master plan for dealing with asbestos in what was slightly more than 1 million square feet of commercial space.

Beacon's asbestos program was aimed at continuing to keep our office environments safe, with an eye toward establishing workable rules and realistic objectives that might obtain whatever the health issue at hand.

The specifics of our project were few and simple:

- After determination of the stability of the ACM, regular air quality testing and inspection were used to monitor the environment;
- Tenants were formally informed of the existence of asbestos in the building and provided with a primer on the matter;
- Rules were immediately issued governing all aspects of maintenance and repair and installation work that might disturb the ACM; and
- Training of all maintenance staff was initiated to teach building personnel how to work safely in an ACM environment.

I decided, with the assent of the properties' partners, that the orderly removal of asbestos was the most appropriate long-term response to the hazard. Whenever there was to be construction activity that would disturb the fireproofing, usually as tenant space was turned over, prior to renovation the space would be completely cleaned of asbestos under the direction of an accredited asbestos removal contractor and team of industrial hygienists. I also decided that when the sprayed-on fireproofing was inaccessible or never at-risk from disturbance (until the building was razed), it would be left intact.

Thus, since 1984, we have implemented a well thought out effort of tenant communication, construction protocols, monitoring, and appropriate removal.

Last year, as we approached having removed and replaced 30 percent of the ACM in our properties in what we believed to be a most responsible and reasonable manner, we decided, as a response to the continued market pressures for more drastic measures and our concern that an "asbestos free" condition was a virtually impossible and unwarranted goal to assemble a team of experts to review the assumptions and effects of our master plan for asbestos. The team, treated at arms-length by us, included an epidemiologist, a physician with expertise in pulmonary issues, environmental engineers and risk-management experts. The Task Force's charge was to evaluate all aspects of our program, and determine any refinements necessary for its continued implementation, including any changes that could speed up the removal process.

Task Force Report

The Task Force's findings, after eight months of work, validated Beacon's program and provided the following insights and guidance on ACM in commercial space.

- The Task Force proposed a goal of "essentially background" asbestos exposure. Achievement of this goal requires that asbestos levels inside the building be controlled to essentially the same as background levels, that is ambient levels of asbestos outside the building. This goal was chosen because:

  - It is attainable while that of "asbestos free" is not;

  - It is in all likelihood as protective of the public health as asbestos free;

  - It is less costly than asbestos free; and

  - It takes into account the vagaries of regulatory and scientific uncertainty.

- The report recommends different levels of action based on the state of the ACM and its location.

  a. Directly accessible and friable, damaged, or deteriorating asbestos containing materials should be removed as soon as possible from all areas which are directly accessible. These are areas of the building which have no barriers between the occupants and the asbestos containing materials and which are accessible to building occupants on a regular basis. Examples include sprayed-on ceiling material where there is no suspended ceiling to provide a physical barrier between occupants and the material, and in maintenance areas where workers enter on a regular basis.

  b. Indirectly accessible and friable, damaged, or deteriorated asbestos containing materials be removed in office space as it become empty. These areas are those which are not directly accessible but can be entered by moving building components in a manner which does not require specialized tools and which does not damage the removed component. Examples include the area above the suspended ceiling and the locked equipment room which is entered only for occasional maintenance and repair.

  c. Friable, damaged or deteriorated asbestos containing materials should be removed from inaccessible locations under the following conditions:

     - When the material is routinely disturbed by maintenance workers, tradespeople, or contractor personnel; or,

     - The material is disturbed only occasionally or rarely but the disturbance is unintentional and not likely to be noticed by the person causing the disturbance.

  d. Non-friable or friable asbestos containing material in good and stable condition is likely to be disturbed only infrequently by personnel who know that it is present and will take proper precautions, should not necessarily be removed.

  e. Asbestos containing materials in inaccessible locations and encased in permanent structures should not be removed.

Thus, it appears from our initial planning and the subsequent research and deliberations of the Task Force that our program is appropriate. It is based on careful consideration of (1) known health risks of very "low level" exposure to asbestos, (2) potential hazards of asbestos removal, (3) current technologies available to monitor and control exposure, (4) costs of removal as well as the costs of leaving asbestos in place, and, (5) the realities of regulatory and scientific uncertainty.

Conclusion

Asbestos was used during a substantial but limited time period. It is having, and will continue to have, a direct impact on a large but limited segment of the building population. Yet, the manner in which asbestos is dealt with is likely to set a precedent for the future regulation of both building materials used as substitutes for asbestos and indoor air quality in general. Until there exists definitive evidence to the contrary, the public needs to be made aware that buildings which contain properly maintained asbestos do not constitute a present danger.

In sum, it seems to us we have followed a prudent and proper course of action to protect the public and the environment, and yet all this serious work begs the broader question: without Congressional and governmental leadership the goal of "asbestos free" could be the public norm that drives the market--an impossible end that works to the detriment of society's environmental aims and places the economic interests of many Americans who have invested directly or indirectly in commercial real estate at risk.

I ask you to consider the "needs" this issue engenders or will generate:

- more research on low-level exposure;
- more affordable and effective testing techniques;
- more disposal sites and remedies, technological or legal, that limit liability for those who have properly followed existing regulations;
- more accredited personnel trained in monitoring and removal methods (since 1984, Beacon's costs have escalated 100 percent as building owners and managers compete for scarce abatement sources); and,
- more public information and education to guide careful consideration of the asbestos hazard and how to keep the environment safe.

The single-most important need is that of informed leadership. Asbestos is a known carcinogen, but in commercial buildings, in stable form away from the public, it presents no known threat to society. Please help us communicate that critical message.

I, along with the members of the National Realty Committee, want to continue to work with you in defining the protocols necessary for a safe building environment. We also welcome the opportunity to work with the Congress and the EPA in developing a public education program to better inform the building population of the facts associated with asbestos-in-buildings so as to calm any unfounded fears which can create havoc. It is, it would seem, in our collective best interest, to achieve standards which will provide guidance for building owners to enable us to assure a safe environment for the public, our tenants and employees.

We--government and business--have the skill, experience and basic technologies to manage and mitigate any real threat to the environment. I hope we will agree to work together to assemble a national policy on asbestos and guidelines for its implementation. To do less ignores the challenge and continues the crisis.

CALIFORNIA HOUSING COUNCIL, INC.

PROVIDING SOLUTIONS THROUGH LEGISLATIVE PROGRAMS

TESTIMONY OF STEPHEN E. CARLSON TO THE SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES -- September 27, 1988

Mr. Chairman and Members of the Subcommittee:

My name is Steve Carlson. I am an attorney and Executive Director of the California Housing Council ("CHC"), an association of the largest owners, developers and managers of residential rental property in California. I am testifying on behalf of the California Housing Council and the Washington, D.C. based National Multi-Housing Council ("NMHC"), a nationwide analog of CHC with whom we share many common members and concerns.

Although mitigation of restrictive rent control laws has been our primary, perhaps sole, focus in California and a major concern of NMHC, the presence of asbestos in our buildings (many of our members also own large inventories of commercial property) has achieved the dubious status as an equally threatening issue for the real estate industry. We acknowledge the need for and recommend steps to prevent fiber releases; yet we are concerned that well intended, but over zealous, attempts to mandate certain actions could be counter-productive at best, and potentially disastrous. It is a housing as well as a health issue.

Our review of this issue was prompted by a number of concerns: Market factors such as lenders and buyers avoiding properties with asbestos. Liability insurance exclusions for asbestos claims (California case law subjects apartment owners to a strict liability standard) coupled with an aggressive plaintiff's bar. Increasing national attention afforded asbestos by the media and public officials; and the desire to continue to provide a safe, comfortable environment for tenants.

Another factor affecting our review of the asbestos problem was Proposition 65, a citizen enacted "Toxics Right to Know" initiative. It requires a "clear and reasonable" warning be provided if one is exposing another to a "significant risk" of exposure to a chemical "known to the State of California to cause cancer or reproductive toxicity." Asbestos was one of the original chemicals on the list. The deadline for warnings, if required, was February 27 of this year.

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We then assembled a task force of our members, environmental attorneys, industrial hygiene and medical experts to attempt to frame a response to these daunting problems.

It is not often that a suggested response to a major, controversial health issue can address the concerns and needs of industry, government and the public as well as we believe ours does. Let me describe it briefly.

We began with the assumption that AHERA, the existing body of law and procedure in the area, is in general a reasonable approach to the problem, and that future legislative or regulatory activity in this area would be based on AHERA principles. Our main thrust is grounded, as is AHERA, in the concepts of knowledge and communication. We recommend, as does AHERA, that all buildings constructed prior to October 12, 1988 be inspected. Unfortunately, because there seems to be only negative consequences flowing from the presence of asbestos, many owners don't want to inspect because they don't want to know. We, of course, counsel against that, but it is a crucial factor to consider in developing a workable and effective public policy. Our recommendation will be a program of voluntary compliance with incentives to encourage owners to take the reasonably simple steps necessary to prevent episodic disturbances, the goal of any asbestos program in a non-occupational setting.

After an inspection determines that ACM is present, its location and condition, we recommend the implementation of Asbestos Management and Operation and Maintenance Programs geared to the specific circumstances of the building. The Guide does not set out a specific program. Instead it covers the factors to be considered when developing such a plan with the aid of legal and asbestos experts. It touches on worker training and protection, work products, fiber release episode procedures, periodic inspection and surveillance, and abatement issues. We part company with AHERA on several matters, such as timing for reinspections, taking into consideration the differences in structure and usage between schools and private buildings. We also suggest factors to consider when choosing a consultant and spend much time on the very important issues of tenant communications and relations.

We balance the possible legal duty to disclose the presence of asbestos (I'll mention other disclosure issues when I describe Proposition 65) with the desire and need to keep good tenants -- our customers. We suggest keeping residents and employees fully apprised of inspection and/or abatement efforts. Several focus groups were conducted with tenants. This research showed that they were most comfortable when they felt they were being given full detail of the presence of asbestos, the steps being taken to address it, and that the work and information was coming from an independent expert.

We supply owners with sample notification letters, and a question and answer document to hand out to tenants that is written by and is on the letterhead of William J. Nicholson, Ph.D., of Mt. Sinai Medical Center in New York, one of the acknowledged experts in asbestos risk assessment. This document puts the asbestos risk in perspective for the tenant. We also recommend certain rules and regulations (such as not drilling plant hooks into a ceiling with ACM) to reduce the risk of tenants disturbing the material.

Although disclosure and communication have always been prime components of our program, Proposition 65 warning regulations concerning asbestos, alluded to earlier, raised another troublesome issue.

Emergency regulations promulgated by the State Health and Welfare Agency set the "significant risk" level for asbestos at 100 fibers per day above ambient air levels. It was calculated by extrapolating to a risk level of 10^{-5} from a number of risk assessment studies. Apart from questions about correctness of methodology or arithmetic, 100 fibers is simply not detectable by any current technology, certainly none within the reach of the average building owner. The inability to disprove the existence of "significant risk", although none existed in most cases, coupled with penalties of $2,500 per day, per violation and a 25 percent "bounty hunter" incentive, caused us to recommend warnings be considered. Owners of over 100,000 units provided Proposition 65 warnings to their tenants earlier this year.

In our comments to the Agency, we questioned the validity of the 100 fiber per day standard and suggested an approach based on our Asbestos Information Guide that we believe has much broader application.

We argued that if a quantitative standard is employed it must be set at a level of practical detectability -- practical, financially and technologically. We are pleased that the Agency is modifying its regulations to provide that if a material is not detectable, it represents no significant risk, therefore, no warning is required. This is a reasonable result and an important consideration as Congress wrestles with risk levels and public policy consequences.

We believe, however, that a quantitative standard does not further the desired goal of an asbestos program in a non-occupational setting -- the prevention of episodic release due to inadvertent disturbance of the material. We suggested to the State Agency that an alternative procedural standard be adopted for Proposition 65 purposes. Our proposal would create a rebuttable presumption of "no significant risk" if an inspection and O & M program, pursuant to accepted protocol, were followed by an owner. Motivating owners to take reasonable, preventive steps is preferable public policy and results in a higher degree of safety than a mere warning. We believe such an

approach can and should serve as the underpinning to general policy directions for asbestos.

A mandatory program will be very difficult to enforce. The Committee is well aware of the problem with accreditation of sufficient experts. A mandatory program would also send out more negative signals and have a detrimental impact on the market and property values by implying a greater health risk than is generally present. We recommend voluntary compliance to an inspection and O & M approach tied to incentives that deal with the major concerns of owners who, I might remind you, were not responsible for the presence of this material in their buildings. These concerns include civil liability, inability to secure financing or refinancing, concerns of investors and keeping tenants in units.

A program tailored to be within the practical reach of all property owners and that encourages through incentives rather than mandates compliance, seems to have the greatest possibility of acceptance and implementation. Perhaps the federal government can set out broad guidelines and allow the states to fill in some of the details based on specific circumstances.

Many of our members in California, and some elsewhere, have already begun to implement or are in the process of implementing such programs. They are working well and there has been a minimum of inconvenience. But any public policy must run the gamut from our large owners to the many smaller ones. Most apartment owners own an average of only 12 units.

Apart from Proposition 65, a number of bills have been considered by the California Legislature, most dealing with schools and accreditation. One that passed this year, AB 3713 by Assemblyman Lloyd Connelly, requires an owner of a building to notify his employees (not tenants) of the location of asbestos if he knows the material is present. One bill that tried to set a standard for a "hazardous condition" was unsuccessful. A reasonable standard, quantitative and/or procedural, is necessary if public policy consequences will be imposed. It is unclear what bills may be introduced next session, but I predict more along the lines of notification.

Other issues to consider are the affects of a mandatory scheme on the housing stock, particularly older and low income housing. Rehabilitating older buildings is one of the best ways to preserve the precious stock of low income housing, and the financial incentive to rehab these buildings is reduced by the high cost of dealing with asbestos -- perhaps some subsidy could be considered in these cases.

To the extent buildings are older or maintenance is deferred, the risk of deteriorated and more easily disturbed material is present. Rent control (especially in its most stringent forms), which is

present in California, New York, Congressman Florio's state of New Jersey, and a few other places, results in deferred maintenance and deterioration of buildings. I have often, with tongue not at all deeply implanted in cheek, suggested that asbestos risks are, in large part, a direct result of rent control.

We believe the presence of rent control must be taken into account when dealing with asbestos laws, espcially if thought is given to mandating compliance upon an owner whose return is already unconscionably low due to stringent rent control. It is not difficult to predict an exacerbation of the demolition and removal of units from the market, a phenomenon already taking place in many rent controlled communities, putting even greater pressure on the housing stock.

I hope our experience and my comments have been helpful to the Committee as it wrestles with this complex problem. Both the California Housing Council and the National Multi-Housing Council offer ourselves as a resource to the Committee as we continue to seek a reasonable solution.

STATEMENT BY

Michael T. Shehadi, Group Senior Vice President
Charles E. Smith Companies
Vice Chairman, National Advisory Council
Building Owners and Managers Association (BOMA) International

Before the Senate Environment and Public Works Subcommittee
on Hazardous Wastes and Toxic Substances

on the

Control of Asbestos in Public Buildings

Tuesday, September 27, 1988

Testimony before the Senate Environment and Public Works Subcommittee
on Hazardous Wastes and Toxic Substances
Tuesday, September 27, 1988
10:30 am, 406 Dirksen Senate Office Building

Mr. Chairman, members of the Subcommittee, I am Michael Shehadi, Group Senior Vice President of Charles E. Smith Companies and a member of the Building Owners and Managers Association (BOMA) International, Vice Chairman of BOMA's Environmental Task Force and National Advisory Council (NAC). NAC is comprised of the key decision makers in the office building industry. I would like to begin by commending you and your Subcommittee for scheduling this hearing and express my appreciation for the opportunity to address you today on the control of asbestos in public buildings. BOMA shares your concern about asbestos in buildings particularly as it relates to the health and safety of our employees, tenants, contractors and the general public. Before I delve into BOMA's activity on the asbestos issue, let me provide you with a brief synopsis of our association.

Founded in 1907, BOMA is the oldest and largest trade association representing the office building industry, with 100 Federated Associations in the United States, Canada, and around the world. We have 6,800 members who are office building developers, owners, managers, service companies, brokers and investors, who own or manage over 5 billion square feet of office space in North America. Approximately 60 percent of our members are property managers, the remaining 40 percent are owners of commercial property. Our members own and manage over half of North America's medium to large size commercial office buildings.

Twenty five years ago, building owners and managers, in concert with local building code officials, legislators and regulators, acted to create what they believed would be safer and more habitable buildings for the public by installing asbestos insulation and fireproofing in commercial properties. In a twist of irony worthy of Joseph Heller's classic novel Catch 22, today's building owners and managers are once again acting to ensure the public's safety, this time by assessing, managing and abating those same asbestos materials.

As you might imagine, the transformation of the public's perception of asbestos from miraculous fire retardant to potentially dangerous carcinogen has dramatically altered the way buildings are managed, marketed, leased and sold. The irrational panic which has gripped the real estate marketplace and was fueled by inappropriate public pronouncements about the presence of asbestos in buildings by federal authorities has led to requests for purchase discounts and efforts to decrease property values. It has led to increased management budgets.

The problems surrounding the asbestos issue encouraged BOMA to choose a realistic and proactive stance. Our Association has acknowledged the impact of asbestos on our industry and has made every effort to deal with this issue in a rational and expeditious manner.

In April of 1987, our association proposed legislation to clarify the issue of asbestos in office buildings. The BOMA Initiative, entitled the "Asbestos in Buildings Act" tackled the issues associated with the abatement of asbestos in buildings and placed our Association firmly in support of federal standards in this area. Prior to the development of our asbestos proposal, BOMA participated in the EPA Negotiated Rulemaking which led to the crafting of regulations implementing the Asbestos Hazard Emergency Response Act (AHERA). We provided the "voice of practical experience" to those participating in the rulemaking based on our familiarity with

asbestos as it relates to commercial, public and residential buildings.

Last year, BOMA was instrumental in organizing the Real Estate Industry Working Group. Made up of members and staff from the International Council of Shopping Centers, Mortgage Bankers Association, the National Association of Realtors, and the National Realty Committee, the Industry Working Group examines environmental questions which impact upon the commercial office building industry with a goal of sharing information and building consensus in approach to these sensitive and critical issues. Drawing upon the provisions of the EPA's "Guidance for Controlling Asbestos Containing Materials in Buildings" (The Purple Book), the AHERA Act and regulations and some aspects of New York City's Public Law 76, BOMA's legislative proposal attempts to balance the need for safe, responsible evaluation and management of asbestos with the high costs of abatement and real concerns with liability.

BOMA believes that legislation on the federal level should standardize asbestos procedures and requirements for all affected property owners and managers. Without such federal intervention, the industry could face a future marked by a chaotic framework of differing local, state and federal requirements.

Our proposal represents an effort to "codify safe, acceptable procedures for identifying problem areas, standardize procedures for abating problem areas, provide definite assurance to owners and managers that reasonable abatement procedures may be undertaken without fear of legal liability, and to provide financial assistance to owners to assist with the tremendous costs associated with abatement of a potential health hazard."

Highlights of BOMA's proposal are:

1) requires the EPA to conduct a scientific study of the real health hazard, if any, associated with asbestos in office buildings and it mandates standards for acceptable levels of airborne asbestos-containing material (ACM);

2) delineates criteria for certifying inspectors, contractors, and others who deal with asbestos, contains requirements for inspections and reinspections at periodic intervals, and it mandates management plans where ACM is found to be present;

3) grandfathers buildings which have already followed EPA guidance procedures in inspecting and abating asbestos, allows selection from among several response actions including encapsulation and enclosure, as well as removal, and it attempts to shift liability to removal contractors and disposal facilities once ACM has been removed from a building;

4) restricts the federal government from applying any policy which would preclude the acquisition of space in a building with ACM;

5) levies a tax on asbestos produced or imported into the U.S., to be applied to costs of asbestos abatement projects, creates an insurance trust fund to help insure owners for abatement projects, and it provides a three-year statute of limitations for filing asbestos-related claims against asbestos manufacturers and distributors;

6) provides flexibility in the selection of response actions dependent upon the condition of the asbestos-containing materials; and

7) recognizes the scheduling constraints presented by multi-tenant occupancies.

In an attempt to garner support for the proposal, BOMA's initiative has been shared with leadership staff of the House and Senate, and our colleagues at other real estate associations. Rep. James Florio's (D-NJ) recently introduced proposal, H.R. 5311, (The Asbestos Hazard Emergency Response Amendments) designed to strengthen and extend AHERA requirements to government and commercial buildings, as well as Senator Stafford's S. 981 and Senator Baucus' S. 1809 reflect several of the provisions found in the BOMA initiative.

Like BOMA's "Asbestos in Buildings" proposal, the Baucus and Stafford bills include contractor accreditation; inspection and management plan requirements and a grandfather clause. In addition to these provisions, BOMA continues to stress the need for the following additional provisions to be considered as part of any new or revised federal effort in the asbestos debate.

EPA Health Study:

The EPA should be required to conduct a scientifically based study of the real health hazards associated with low levels of asbestos exposure found in ACM containing office buildings. Such a study should provide clear standards for determining when asbestos containing materials pose a risk and should be removed and when they pose little or no risk and can be left in place. There is no current evidence which suggests that the mere presence of asbestos in a building poses potential hazards to tenants and employees. Indeed, even in the cases where hazardous friable asbestos is present in a building, research indicates that unless it is disturbed and entrained into the air the potential health consequences appear to be negligible. The EPA tells us that unless or until circumstances warrant its removal, asbestos can be managed in place. The market place nevertheless drives our industry toward removal. As part of the mandated study a safe level of asbestos in office buildings must be determined.

It would be appropriate at this point to digress and discuss the congressionally mandated and funded Asbestos Research Project contained in the HUD appropriations measure, P.L. 100-404. After months of discussions BOMA and others were able to secure Congress and the EPA's help in initiating a long overdue study on the health effects of exposure to asbestos in buildings. The HUD appropriations bill provides language requiring "$2,000,000 to be matched on at least a 50-50 basis by contributions from private sources for research to determine actual airborne asbestos levels prevalent in buildings containing asbestos materials and to definitively characterize peak exposure episodes and their significance. A statistically reliable scientific evaluation of the effectiveness of asbestos management and abatement strategies is also sorely needed." The Health Effects Institute (HEI), a research institute founded in 1980 and widely respected for its cooperative EPA/automotive industry study on the health effects of automobile emissions, was chosen as an appropriate institution to coordinate a three year research effort.

BOMA, along with our colleagues in the Real Estate Industry Working Group are currently working with Susan Vogt, Acting Deputy Assistant Administrator for the EPA's Office of Pesticides and Toxic Substances and Dr. Chuck Powers, Executive Director of the HEI, to secure financial commitments from private sources and help in defining the parameters of the asbestos research project.

Clearance Levels:

On the issue of clearance levels, BOMA believes that post abatement airborne asbestos levels should not exceed the EPA guidance of 0.01 f/cc, for Phase Contrast Microscopy (PCM) or the AHERA regulation's statistically averaged 0.02 f/cc, for Transmission Electron Microscopy (TEM). Further, if the indoor concentration of asbestos exceeds these limits after abatement, but does not exceed the outdoor concentration of asbestos, the abatement action should be considered complete. BOMA supports the use of PCM in conjunction with TEM and encourages the Congress to reevaluate the AHERA regulations which call for a phase out of PCM. The use of TEM alone is expensive and time consuming. Its use is seriously complicated by the limited pool of equipment and qualified personnel available to conduct this analysis. The combined use of PCM and TEM allows flexibility and provides for safe, responsible analysis.

Liability:

On the issue of liability our Association strongly feels that once a building owner or manager has removed asbestos from a building, liability for removal from the site, transportation and disposal should end. Instead, liability for these actions should rest with the removal contractor and disposal facility. BOMA supports the creation of a three year statute of limitations for filing asbestos related claims against asbestos manufacturers and distributors and an insurance trust fund to help insure owners for abatement projects. As you are no doubt aware, many insurance companies began last year to exclude environmental hazards from liability coverage. Today few, if any, commercial office building owners have the luxury of this important coverage.

Industry Sponsored Asbestos Education

In order to de-mystify the deeply complicated and sometimes confusing matter of asbestos containing materials in buildings, BOMA has conducted seminars aimed at instructing our members in a wide spectrum of asbestos related-related issues. In the last two years alone, BOMA organized six regional asbestos management seminars, each offering valuable information to commercial real estate professionals and local government officials. In further pursuit of asbestos education, BOMA has published a pamphlet entitled Answers To The Most Commonly Asked Questions About Asbestos In Buildings. We request your permission to submit this document into the hearing record.

Individual Building Owner and Manager Responses to Asbestos

While BOMA deals with asbestos as a legislative matter in Congress and as a pressing problem among our membership, a number of our members deal with asbestos as an immediate and real problem within their own buildings. A poll conducted by BOMA in the summer of 1987 sheds light on the actions these building owners and managers are taking regarding asbestos in their buildings, and the motivating factors behind their actions.

For those who had asbestos in their buildings and participated in the poll based upon 453 million square feet of office space in the United States, 40% of the respondents claimed to be taking actions, ranging from long term management plans (24% of those taking action), to comprehensive operations and maintenance plans (24% of those taking action), to repair (12% of those taking action), encapsulation (15% of those taking action), enclosure (8% of those taking action) and removal (31% of those taking action).

More revealing were the reasons these building owners and managers were taking these actions. When asked to rate the importance of each of the following factors (on a scale of high, medium or low: Public Relations; Tenant/Occupant/Employee Pressure; Lender Required; Investor Required; Potential Liability; Renovation or Remodeling; Federal/state/local Law; Company Policy), a clear majority indicated that both company policy and potential liability were highly significant reasons for taking some kind of action. Also considered highly significant by a large number of those building owners and managers who took action were public relations considerations, and the convenience of concurrent renovation or remodeling activities. Perhaps reflective of BOMA's pro-active, preventative posture and our members responsiveness to the interests of their tenants, was the reported low significance of tenant/occupant/employee pressure as a motivating factor for implementing response actions. This is not, however, a reflection of the fears or concerns uninformed tenants, occupants and employees may have expressed to owners or managers.

In summary, it is interesting to note that in the 1960's asbestos (better known then as the "wonder fiber") was installed for an average of 25 cents a square foot. It is now costing an average of $30 a square foot to remove. Environmental industry analysts have estimated that government and commercial property owners could spend $100 billion over the next twenty five years to remove asbestos. Our members are unable to secure sufficient liability coverage to protect against lawsuits resulting from environmental causes. We are bearing the brunt of changes in the financial real estate market as it relates to the value of our commercial properties. Many large institutional investors are reluctant to finance asbestos containing properties. Some lenders are refusing outright to write mortgages on buildings containing asbestos. Some investors are forcing property owners to discount the price of properties which contain the "wonder fiber". In an already tight real estate marketplace, building owners and managers face situations where uninformed tenants are reluctant to rent.

Our objective in dealing with the problem of asbestos in buildings is to assist our members in protecting their employees, tenants and assets -- to allow our members to employ sensible, professional operations and maintenance strategies and avoid counterproductive or unnecessary response action. We are also deeply committed to quieting the hysterical cries for arbitrary removal of asbestos from buildings. We continue to support the provision of minimum safety standards associated with the levels of airborne asbestos found in buildings that will assure the public, tenants and employees of a safe working environment. This is critical if we are to abate the fear that is continuing to motivate needless hysteria in the marketplace. There must be an appropriate definition for hazardous friable asbestos consistent with scientific findings relative to the low levels of exposure found in buildings and an achievable post-abatement air standard recognizing the availability of technology. Building owners and managers must be allowed the flexibility to decide to abate or manage asbestos in buildings.

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Testimony of the

INTERNATIONAL COUNCIL OF SHOPPING CENTERS

on

ASBESTOS IN COMMERCIAL BUILDINGS

Presented by:

Robert J. Navratil
Vice President,
Construction and Capital Programs
The RREEF Funds

before the

Senate Committee on Environment and Public Works
Subcommittee on Hazardous Wastes & Toxic Substances

September 27, 1988

I. Introduction

I am Robert J. Navratil, Vice President, Construction and Capital Programs of The RREEF Funds. RREEF owns and operates shopping centers in 25 states, including a shopping center in Colorado which had an unfortunate experience with asbestos last year that we believe is instructive regarding the problems of asbestos in commercial buildings and the solutions to these problems.

I am also a member of the Environmental Issues Task Force of the International Council of Shopping Centers (ICSC) and I am testifying on behalf of ICSC. ICSC has over 24,000 U.S. members who own virtually all of the 30,000 shopping centers in the U.S. These shopping centers employ almost nine million persons and each month over 90 percent of all Americans over the age of 18 visit a shopping center. Shopping centers account for 54 percent of all nonautomotive retail sales, amounting to $584 billion, and provide 3.7 billion square feet of leasable retail space.

ICSC appreciates this opportunity to present its views on the issue of the regulation of asbestos in commercial buildings and on the asbestos legislation before the Subcommittee.

ICSC would like to make four points in its testimony today.

First, shopping center owners recognize there is a potential health problem caused by the presence of asbestos containing materials in buildings and are committed to dealing with asbestos in a safe and prudent manner and is spending millions of dollars managing and removing asbestos and it appears that additional billions will be spent by the industry for the purpose in the future. Because of the experience of shopping centers with asbestos, ICSC believes it is in a position to describe the serious problems involved in the management of asbestos containing material in buildings and to recommend positive steps to remedy these problems.

Second, the practices and public policies regarding asbestos in commercial buildings today are counterproductive from both environmental and economic policy perspectives. There is tremendous pressure to remove all asbestos-containing building materials, regardless of their condition or the ability to manage them without release of fibers into the air. This pressure is caused by uncertainty among the general public and local health officials about the nature of the health risks caused by asbestos in buildings and appropriate remedial actions, by insufficient guidance from EPA, by regulations that encourage removal, and by other factors.

Congress should determine whether the health risks created by the presence of asbestos in properly managed commercial buildings warrant the adverse consequences of the ongoing removal of asbestos from all buildings: 1) the health risks from improperly conducted removals, the transportation and disposal of removed asbestos, and potentially from its replacement with other fibrous fireproofing materials; and 2) the enormous unnecessary economic cost to the economy.

Third, the EPA's asbestos in schools regulations, issued under the Asbestos Hazard Emergency Response Act (AHERA), while providing some useful guidance, also have created additional problems. For this reason, the effectiveness of the regulations as applied to schools should be evaluated and the problems remedied before Congress considers extending the regulations to commercial buildings. In addition, extending the AHERA regulations to commercial buildings would not solve the major asbestos problems in buildings.

Fourth, Congress should direct EPA to take actions that would solve the problems of managing asbestos in commercial buildings. EPA should update its scientific basis for regulating asbestos with the most recent scientific information from all credible sources. EPA should differentiate between different types and sizes of asbestos when assessing the health risks of various exposure levels and should clearly compare asbestos exposure risks to the other risks of everyday life. EPA should indicate what exposure level represents a reasonable risk, based on: 1) the asbestos health risk at low exposure levels; 2) other risks of everyday life; 3) the problems created by removal, including potential new health risks associated with the removal, transportation, disposal of asbestos and its replacement with other fireproofing materials; and 4) the enormous economic cost of removal, with the billions of dollars expended in unnecessary removal actions that will not be available for investment or the remediation other of environmental problems.

II. Asbestos in Commercial Buildings: Practices and Policies

A. Nationwide

Asbestos has become a serious problem for many commercial buildings, primarily because of the tremendous pressure to remove all asbestos-containing building materials regardless of their condition or the ability to manage them without release of fibers into the air. Prospective purchasers are reluctant to buy buildings containing asbestos and do so only at steep discounts. Some lenders have formal policies banning loans for any building with asbestos-containing materials. State regulators have adopted extreme positions on exposure levels in the absence of a Federally sanctioned level.

The response of many building owners to these circumstances is to remove asbestos containing material whenever space is vacated by tenants, despite the fact that the exposure level in a properly managed building does not create an unreasonable health risk. Air tests by building owners and EPA show that exposure levels in commercial buildings are very low, even in buildings with damaged asbestos, and are virtually indistinguishable from the ambient levels in the air outside the building.

Environmentally unjustified asbestos removal has adverse environmental and economic effects. If the removal is not done properly, it increases the health risks to asbestos abatement workers and building occupants. The transportation and disposal of removed asbestos creates additional health risks. The installation of fibrous fireproofing and insulating materials commonly used to replace asbestos, such as fiberglass or rock wool, may present health hazards similar to asbestos. Finally, the expenditure of enormous financial resources in unnecessary removal actions, and the unjustified reductions in property values impede economic growth and tend to discredit legitimate environmental concerns.

These consequences are the result of the content and timing of information on asbestos disseminated, principally by the Federal Government, in the form of legislation, regulations, and other health effects data, and the reports of this information by the news media. The information disseminated indicated that asbestos causes fatal diseases at high concentration levels and that there is no known, non-zero exposure level at which there is no health risk. This information was not concurrently accompanied by additional information clearly identifying the degree of risk at various exposure levels, comparing this risk to other risks of everyday life, or suggesting at what low level asbestos does not present an unreasonable health risk considering other risks of everyday life, the risks created by removal, and the costs of removal.

B. Colorado

An incident occurred last year in a shopping center that RREEF owns that is instructive regarding asbestos problems in commercial buildings and the actions of the Federal Government that would provide remedies to these problems.

In 1985, RREEF was considering the purchase of the Southglenn Mall in Denver Colorado. As part of the analysis of the purchase, RREEF engaged an asbestos consultant to determine if any building materials in the mall contained asbestos. The consultant had worked with EPA and had performed asbestos analysis work for major corporations and had an excellent reputation. He prepared a list of areas of the mall that contained materials that could contain asbestos and then sampled

22 areas for asbestos. The samples, including samples from the ceiling of the common area of the mall, were sent by the consultant to a reputable laboratory for analysis. The results from the tests were that the mall contained no asbestos. On that basis, we purchased the mall in 1985.

Unfortunately, subsequent testing by the EPA showed that the common area ceiling did contain asbestos, although some samples showed that it did not. This was not discovered until 1987 when we undertook a major renovation of the common area of the mall.

With the exception of stores that had outside entrances and could be sealed off from the common area of the mall, the mall was closed. We immediately erected structures to seal off the interior stores from the renovation work. Once these structures were erected, we cleaned the stores to remove any accumulated dust and then tested the air for the presence of asbestos fibers, using EPA recommended TEM analysis. The samples had to be sent out of state for analysis because there was no commercial laboratory in Colorado capable of performing the TEM analysis.

The process of showing the State Health Department that it was safe to reopen the mall was lengthy. Some stores in the mall were closed for three months. Despite rent abatements and cash payments by RREEF to the tenants, two tenants went out of business. All of the tenants, mostly small businesses, suffered major financial hardships because of the lengthy closure of the mall.

We believe that there are several lessons to be learned from this experience.

1. The climate of unreasonable fear of asbestos, in the extreme represented by the "one fiber can kill you" school of thought, produces absurd results in practical situations involving asbestos in buildings. The uncertainty about the real health risks of the low exposures common in buildings, especially in the perspective of the other risks of everyday life, and the consequent uncertainty about what exposure constitutes an unreasonable risk makes it difficult to rationally determine how clean is clean enough.

Most of the delay in reopening the mall was caused by the uncertainty of the health department in dealing with situations not discussed in the "purple book" or the AHERA regulations, such as dust accumulations and the potential contamination of clothing. The climate of fear and the absence of sufficient guidance about what constitutes a situation of no unreasonable risk made it difficult for the Health Department to provide consistent guidance on what was acceptable.

2. EPA's efforts to specify testing methodologies and certify consultants as competent to provide analysis and advice regarding asbestos containing material are essential. The publication of the "purple book" has been very helpful and we are working with EPA on a model operations and maintenance guidance document that we hope also will prove helpful.

In the absence of EPA approved procedures, our experience indicates that state health officials are unwilling to approve remedial actions or clearance tests suggested by competent consultants. For example, because of the general climate of fear of asbestos and the lack of EPA procedures regarding the decontamination of clothing containing asbestos fibers, all of the clothing in the mall had to be destroyed. In fact, the level of asbestos fibers in the clothing in the mall was no greater than the level in clothing in other shopping centers in Denver that had no asbestos. The asbestos fibers in the clothing apparently were from the ambient air in the cities where the clothing was manufactured or from the transportation or distribution facilities that had handled the clothing.

3. EPA must indicate what concentration levels above zero represent no unreasonable risk. Since the Southglenn Mall incident, the Colorado legislature has set a maximum allowable air level of 0.01 f/cc (measured during normal occupancy, eight-hour time-weighted average, analyzed under PCM).

Had this legislation been in place during the incident, we could have opened the mall at least one month sooner than we did in the absence of a Federally sanctioned number to justify the Health Department's decision to allow us to reopen.

4. Some aspects of the AHERA regulations created unanticipated problems at Southglenn. In general, the regulations appear to create a bias in favor of removal. For example, the provision that indicates that removal is always an acceptable response action. Specific AHERA provisions also created problems. For example, the prescribed aggressive sampling procedure for clearance, where high power leaf blowers are used to stir up any dust, may be appropriate for clearance after a the removal of all asbestos from a building, but it is counterproductive in a situation where such areas of the building are not involved in the removal action and may have years of accumulated dust, particularly where those areas continue to contain asbestos.

In Southglenn Mall, the Health Department directed the leaf blowers against surfaces that were not involved in the renovation project and that contained asbestos. The high speed air dislodged fibers from the materials and created a problem of airborne asbestos fibers. The AHERA regulations should be

revised to prohibit this practice under these circumstances. The recent Colorado legislation makes this improvement.

III. Problems With the AHERA Approach and Regulations

Although the AHERA regulations do not apply to commercial buildings, many building owners and state regulators have been using the regulations as a guide in their efforts to deal with asbestos in commercial buildings. Our experience with the regulations indicates that there are several significant problems with them. We do not believe that these regulations should be extended to commercial buildings until Congress and EPA have reviewed their effectiveness as applied to schools and considered what improvements should be made based on that review. Indeed, Congress should direct EPA to perform an analysis of the cost and effectiveness of the AHERA regulations after schools have complied with them.

Some of the problems we have identified in dealing with the AHERA regulations are the excessive subjectiveness and lack of uniform application of the rules, the potential for misuse of the rules, and the lack of an objective standard to establish when no unreasonable risk exists.

The visual inspection approach taken by the regulations is inherently subjective. Studies showing that trained inspectors frequently disagree in their visual assessments have been widely reported. Our experience confirms these reports. The regulations should be clarified to eliminate ambiguities and complex distinctions. For example, the definitions of "damaged", "significantly damaged", and "potential damage" are difficult to apply in practice. In addition, asbestos containing material may be damaged and yet present little or no increased likelihood of releasing fibers.

As discussed above, the prescribed aggressive air sampling method should be limited to situations where all of the asbestos containing material in a building is removed.

As discussed below, the lack of an objective standard for measuring the exposure in a building is a major impediment in establishing a proper course of action.

IV. Providing Solutions to Asbestos Problems

Rather than extending AHERA to commercial buildings, we recommend that Congress consider other approaches that would address the problems that have been identified regarding asbestos in commercial buildings.

A. Review Scientific Evidence Regarding Low Level Exposures

EPA should update its scientific basis for the regulation of asbestos. Much new scientific information, from domestic and foreign researchers, has been produced since EPA reviewed the literature and developed its basic asbestos policies in 1984. In particular, EPA should consider studies showing the low levels of airborne asbestos fibers in buildings, which generally are indistinguishable from outdoor ambient air levels. EPA should also consider studies showing markedly different health risks from different types and asbestos and from different sizes of asbestos fibers. EPA also should study the potential health risks of materials commonly used to replace removed asbestos for fireproofing materials.

EPA should also provide thorough information on the risks associated with various exposure levels, should indicate where this risk information is based on extrapolations rather than observed epidemiological data, and should reference the studies relied upon in making the estimate. The Indoor Air Quality Act of 1988, S. 1629, recently reported by the Committee, contains this direction to EPA regarding indoor air contaminants. These risks should then be related to other risks of everyday life to enable the public to evaluate and put in perspective the nature of the health risk caused by the presence of asbestos in buildings.

EPA should then consider establishing different clearance limits for different types of asbestos and consider redefining the size of asbestos fibers to be counted to eliminate small fibers that research indicates do not lead to disease.

B. Suggest a "No Unreasonable Risk" Air Level

The clearance limit is the only objective standard in the AHERA regulations. This standard would be more useful if EPA would indicate that the clearance limit represents an acceptable concentration level where there is no unreasonable health risk, based on the estimated risks of low level exposures, compared with other risks of everyday life, and considering environmental and economic problems associated with removal.

Although it appears to be true that there is no data on the health effects of asbestos exposures at the low levels found in buildings, this should not preclude EPA from indicating that very low concentration levels are acceptable. It must be recognized that state and local government officials, with far less information than EPA, will be forced to make this determination, as they were in Colorado. We believe that EPA is the appropriate government agency to make this determination.

In addition, air testing protocols should permit testing primarily by the faster and lower cost phase contrast microscopy (PCM) method, with testing of random samples and samples with higher PCM readings by transmission electron microscopy (TEM).

V. Conclusion

We urge the Subcommittee to carefully consider the situation regarding asbestos in commercial buildings today and draw an appropriate balance between avoiding unreasonable health risks due to the presence of asbestos in commercial buildings and avoiding the adverse environmental and economic affects caused by unnecessary removal. The costs and effectiveness of the AHERA regulations as applied to schools should be studied and problems with the regulations remedied before Congress considers extending the regulations to commercial buildings. Congress should direct EPA to update its scientific basis for asbestos regulation and to indicate that the clearance limit represents a reasonable exposure level given all the circumstances.

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Mortgage Bankers Association of America

STATEMENT OF

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on behalf
of the

MORTGAGE BANKERS ASSOCIATION OF AMERICA

before the

SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

To Investigate

The Presence of Asbestos in Federal and Commercial Buildings

September 27, 1988

Mr. Chairman, my name is H. Le Van Varick. I am Executive Vice President of the American Savings Bank of New York City. . I am Chairman of the Environmental Subcommittee of the Income Property Committee and a member of the Legislative Committee of the Mortgage Bankers Association of America (MBA)* I am accompanied by Burton C. Wood, Senior Legislative Counsel, and Ann Hadley vom Eigen, Associate Legislative Counsel of the Mortgage Bankers Association.

MBA appreciates this opportunity to present the Subcommittee with some background information on the activity that is currently taking place in the real estate industry in response to the potential health threat of asbestos containing materials (ACMs) in existing structures.

MBA is sensitive to and concurs with the Subcommittee's objective in investigating this issue and the objectives of those members sponsoring the public and commercial buildings legislation (S 981 and S 1809, "The Toxic Substances Control Act Amendments Acts of 1987" and S 2687, the Asbestos Information Act), namely protection of human health from the hazards associated with asbestos. Our members are committed to exploring this issue through technical and scientific research, and have already contributed funds to a joint EPA/private sector study funded in the Department of Housing and Urban Development and Independent Agencies Appropriations Act for FY 1989 (P.L. 100-404). We hope that this study, designed to determine actual airborne exposure levels prevalent in buildings, to characterize peak exposure episodes, and to evaluate the effectiveness of asbestos management and abatement strategies will provide us with useful, practical information to help us address asbestos problems.

Consequently, we believe we can best use this forum to facilitate the Subcommittees' understanding of the profound, continuing economic impact on the real estate industry of the presence of asbestos in commercial and residential properties and the various legislative proposals offered in response to this problem.

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*The Mortgage Bankers Association of America is a nationwide organization devoted exclusively to the field of housing and other real estate finance. MBA's membership comprises mortgage originators and servicers, as well as investors, and a wide variety of mortgage industry-related firms. Mortgage banking firms, which make up the largest portion of the total membership, engage directly in originating, selling, and servicing real estate investment portfolios. Members of MBA include:

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LENDER EXPERIENCE AND CONCERNS

Let me assure the Subcommittee that there is substantial attention to asbestos in the commercial real estate industry. From a lender's perspective, the presence of asbestos requires balancing competing concerns regarding tenant perception of the health risk of asbestos, potential tort liability, public health, and economic and practical limitations.

We emphasize that our role in the industry differs somewhat from the other real estate groups who are testifying today. We are primarily lenders, who can become owners if a default occurs. Our perspective on asbestos issues thus has three major features: we provide short and long term financing for properties, and thus serve as (1) lenders (and sometimes as) equity participants who will be providing the capital for new construction and acquisition, (2) holders of security interests on existing properties containing asbestos, and (3) a possible source of financing for abatement actions that require significant expenditure of funds.

NATIONWIDE RESPONSE

Inspection

Many lenders on income producing properties are responding to asbestos problems both at the time new loans are originated, and on properties backed by loans and equity investments in existing portfolios. As outlined below, while the response actions taken varies the problems they attempt to address are the same. Lenders and/or owners must make their properties free of health hazards, attractive to tenants, and in compliance with Federal, state, and local laws.

Many commercial real estate lenders for their own purposes (to determine whether health-threatening situations exist, and concurrently to identify and address potential tort liabilities) determine whether asbestos is present in a building. This is relevant to a determination of the adequacy of the collateral. Many commercial real estate lenders have been requiring, as part of their mortgage loan underwriting, what is commonly referred to as Phase I Environmental Assessments/Audit, with the results determining whether a more extensive and expensive Phase II is needed. These assessments may be undertaken for new loans, refinancings, and potential foreclosure cases. If asbestos is found, owners and lenders face two major alternatives--full removal or acceptable abatement--and a third de facto alternative, no action. Lenders and owners may face potential residential and commercial tenant dissatisfaction, no matter which of these alternatives they pursue.

Because many residential mortgage lenders originate a loan and sell it on the secondary market in order to obtain capital to make more loans, lenders who sell their loans must accommodate the concerns of the secondary market for residential loans. For instance, the Federal National Mortgage Association (FNMA) (a federally sponsored enterprise that buys conventional home mortgages from lenders and holds them or places them with investors) is presently making efforts to address hazardous waste and other environmental problems such as asbestos in its underwriting guidelines for multifamily and single-family properties.

FNMA has developed Environmental Hazards Management Procedures describing the procedures that lenders must follow to assess and maintain the environmental condition of properties pledged as security in a new Delegated Underwriting and Servicing program for multifamily loans. The FNMA Environmental Hazards Management Procedures indicate that "the presence of either friable asbestos-containing materials or substantial amounts of nonfriable asbestos-containing material that cannot be safely encapsulated and/or removed or will not be routinely inspected and maintained by the borrower can make a property ineligible for the delegated underwriting program." (Source: Part X, Environmental Hazardous Management Procedures, FNMA Delegated Underwriting Standards: Multifamily Program.) (The delegated underwriting program allows a lender to process and underwrite a loan for sale to FNMA; the prior approval program requires that FNMA review documentation before a loan is accepted for purchase.) To date, mortgage bankers are complying with FNMA requirements.

In addition, because of the great number of single-family and multifamily loans purchased on the secondary market by FNMA, their policies will have a direct impact on the many transactions in which they are used and an indirect impact, as a precedent for the industry, on other transactions.

Abatement

Lenders and owners are presently uncertain whether removal or abatement is appropriate, despite the existence of EPA's Guidance for Containing Asbestos-Containing Materials in Buildings (the Purple Book), June 1985 and Federal standards under the Asbestos Hazard Emergency Response Act (AHERA). Even where asbestos is not friable and is subject to a reasonable operations and maintenance program, tenants may vacate at the end of their lease terms, or owners might abandon buildings or residences without regard to any level of actual risk. Conversations with lenders indicate that both these responses have actually occurred.

As a result of the uncertainty of market reaction, many owners have completely removed asbestos, although containment action might have been more appropriate under EPA guidelines. In addition, some building owners are removing asbestos from tenant spaces as tenants move--even where such action is not required by the lender or by state or local law or regulation.

Substantial abatement activity is being undertaken despite some of the practical difficulties these actions entail. A lack of competent personnel appears to be a widespread problem, and it is difficult to meet sometimes impractical laws and regulations. Abatement poses particular difficulties in multifamily residential property because vacancies often do not occur floor by floor which may make containment more difficult. Unlike school buildings, commercial and residential properties are usually not vacant for a period of the year, so consideration must be given to tenant relocation during abatement. Our members' experience with other environmental hazard abatement actions, e.g., lead-based paint, indicates that substantial rehabilitation often requires tenants to relocate. This would seem to be an even larger concern with asbestos removal, because it is generally accepted that it would be harmful for tenants to remain during the removal process. Relocation is a particularly difficult problem in residential properties

because many tenants will be unable to find alternative affordable housing and many may be unable to afford the rents in substantially rehabilitated units. Consequently, asbestos removal actions may conflict with tenants' housing needs.

In addition, once it is determined that an abatement or removal action will be undertaken, owners have been faced with the need to finance this action. At present, funds for this endeavor must be generated out of a project's operating funds, or financed. In extreme instances, borrowers have not had sufficient cash flow from the project to continue to make mortgage payments in addition to financing substantial inspection, abatement, and operations and maintenance programs, and have defaulted on loans. In some instances, owners have abandoned the property, and in a few cases, property has reverted to states.

As a result of projected removal and abatement costs, some owners find themselves unable to take any abatement or removal action. These owners are consequently risking substantial potential liabilities. While to date, plaintiffs who believe they have incurred asbestos-related diseases as a result of exposure in commercial and/or residential facilities have sued only the manufacturer of the asbestos product; however, lenders and owners are concerned about potential tort liability. Potential tort liability serves as a substantial incentive to comply with EPA guidance and expert recommendations even where such action is not required by state or local law or regulation, or may not be the safest alternative.

The New York Experience

The present situation in New York City, resulting from the 1985 New York City law and enabling regulations regarding asbestos removal in renovation and demolition projects, may help the Subcommittee to determine the approach and the timing of Federal requirements. The need to remove asbestos in response to market demands in New York, the need to comply with the requirements regarding the use of trained personnel and disposal of hazardous materials, and the difficulty of doing so in a reasonable time seems to have produced an unproductive response.

Much asbestos removal takes place in conjunction with renovation. The New York City law provides that renovation or demolition projects which disturb asbestos must be conducted in accordance with procedures established by that law and enabling regulations, and that workers who handle materials containing asbestos most receive appropriate training.

MBA members have indicated that renovation and conversions are substantially delayed in New York due to the insufficient number of trained personnel to perform the abatement work. They contend that a six- to nine-month construction delay is not unusual due to the unavailability of trained personnel.

Asbestos removal costs approach $50 per square foot in New York City. It has been estimated that 15 to 18 percent of the cost of removal is tied to insurance and set up of the site for the removal process. We note that a legislative proposal introduced in the House, HR 5311, requires asbestos contractors to provide assurance of financial liability. Such a requirement applied in New York, would tend to drive asbestos contractors out of business, as insurance cannot presently be obtained.

In January 1987, the Unites States Attorney for the Eastern District of New York charged 25 people connected with 23 companies with giving bribes to Federal inspectors to overlook violations of Federal asbestos rules and regulations regarding the working conditions under which removal occurs. There has been speculation that these crimes reflected the large demand for, and short supply of, asbestos contractors.

Further, there is only one hazardous waste dump in New York, the Muldoon Avenue landfill, and it will take asbestos in limited amounts by appointment only. Consequently, illegal dumping of asbestos is common, and, in fact the Lincoln Tunnel has been closed twice due to asbestos dumping in the past year. Thus, the lack of disposal areas is exacerbating an already serious problem.

The City of New York Department of Environmental Protection recently studied In-Place Asbestos in public buildings. In September, they announced that most of the asbestos containing material (ACM) in poor condition was found in areas that were generally inaccessible to the public (e.g. furnace rooms.) Of the buildings containing ACM in surfacing materials, only 1-4 percent was in poor condition.

We note that when New York City Department of Environmental Protection Commissioner Schultz presented the findings of the study in September, he indicated "Asbestos presents a health risk when it is disturbed, or in a deteriorated condition allowing the release of fibers which can be inhaled. While the preliminary findings indicate the need for a city program to deal with asbestos in poor condition, the precipitous removal of all asbestos would cause the unnecessary disturbance of that asbestos which is in good condition, creating a significant risk where there is currently little or none."

We applaud New York's efforts to prevent panic, yet also to begin to address the most severe problems, which in this case they identified as dealing with thermal insulation.

My own lending institution, which lends nationwide, requires borrowers to obtain site assessments conducted and certified by an independent qualified environmental consultant(s) as a condition precedent to the lender's obligation to close or fund the loan.

We also ask mortgagors to warrant that there is no friable asbestos or ACM on the mortgaged property.

Conclusion

MBA recognizes and shares the Subcommittees' concerns about the health effects of asbestos in school buildings and in public and commercial buildings. MBA believes that the presence of asbestos in buildings is a serious problem and that the market is becoming increasingly responsive to these concerns.

As an association, MBA supports a national commitment to protecting the environment and the public health from the deleterious effects of pollution and hazardous substance contamination. The effort to clean up existing contamination

and to prevent future contamination is an important public goal of society and government at all levels.

To this end, MBA supports industry-wide and public education and information campaigns to provide accurate and timely information regarding environmental hazards and appropriate abatement or hazard reduction techniques, and is presently evaluating the appropriate mechanism for its own organization to meet those goals with regard to the asbestos problem.

MBA understands that the Subcommittee does not intend to impede the efficient working of the real estate finance, housing, and commercial development markets. Consequently, we ask the Committee to note that there is a growing trend for commercial real estate owners to require environmental inspections nationwide, but there is presently a severe shortage of qualified asbestos inspectors abatement contractors, and disposal sites, and inconsistent response actions to the problem.

We urge the Subcommittee to reflect on the AHERA experience including the recent need to extend the deadline for inspection. In addition, we note that several major differences that presently exist between implementation of AHERA and a proposal for public and commercial buildings. One of these differences is financial assistance. None of the Senate bills provide direct assistance, tax incentives, insurance, or guaranty authority to assist in financing the cost of meeting imposed inspection and/or abatement requirements, or any other incentives to attract private funds to solve this problem.

Further, while school buildings are vacant during many periods of the year, commercial and residential facilities are, ideally, fully and continually occupied. Consequently, abatement may be undertaken when vacancies occur and when renovation and remodeling are undertaken. We hope that the Subcommittee will be sensitive to the practical limitations faced by owners, those who finance properties, and tenants living or working in those properties and that the Subcommittees will establish priorities based on those limitations.

The bills before the Committee would require the Federal government to focus attention on the problem. However, they do not, on the face, reflect current perceptions regarding asbestos problems. Specifically, although both the EPA and New York City have concluded that thermal insulation is the worst problem, neither bill focuses on that issue.

We hope that the Committee focuses its effort on development of more instructive information with respect to ACM's. The Committee should focus not on inspections, but on the airborne levels of asbestos. We hope that, should the Committee choose to require EPA to propose standards they would:

> Be reasonably related to the potential health risk and reflect identifiable needs for hazard abatement or hazard reduction;
>
> Incorporate a sensible balancing of the costs imposed on tenants and owners with the benefits derived from compliance with the guidelines or standards;

Reflect the availability, effectiveness and cost of both technology and trained personnel to perform inspection and/or abatement functions;

Reflect the timing demands of real estate transactions; and

Require appropriate means of determining competence of inspectors, contractors and testing laboratories who engage in detection, abatement and/or testing of environmentally hazardous materials.

We look forward to working with the Subcommittee to address these issues in legislative proposals.

STATEMENT BY JAMES T. GOLDEN
INTERNATIONAL REPRESENTATIVE
SHEET METAL WORKERS' INTERNATIONAL ASSOCIATION

BEFORE THE

SUBCOMMITTEE ON IDENTIFICATION AND
MANAGEMENT OF ASBESTOS IN PUBLIC BUILDINGS

ON S.981-S.1809-S.2687
ADDRESSING THE PRESENCE OF ASBESTOS
IN FEDERAL AND COMMERCIAL BUILDINGS

TUESDAY, SEPTEMBER 27, 1988

The Sheet Metal Workers' International Association, founded 100 years ago, in 1988 has over 110,000 members engaged in a number of construction skills categories.

One of these skills is the manufacturing, installation, remodeling and dismantling of heating, ventilating and air conditioning products. Indeed, the majority of our members are employed in this field.

For this reason, I would like to discuss the importance of points 1, 4 & 5 referenced in the third paragraph of your invitation letter of 9/26/88, attached.

The requirement for the EPA to compile and catalogue information to help identify specific types of asbestos in federal and commercial buildings is absolutely essential to the health and safety of our members, the building occupants and the general public.

In the U.S. Department of Labor, OSHA's Office of Regulatory Analysis estimates that the projected number of workers exposed to asbestos levels above the PEL of 0.2 f/cc to be at 82,400 in renovation, 93,590 in routine maintenance of commercial/residential buildings and 84,590 in routine maintenance with the general industry category. [Federal Register Vol. 51 No. 119, Friday 6/20/86, page 22655 (attached).]

OSHA has determined that engineering controls such as negative pressure enclosures and vacuums are generally effective in limiting exposures after asbestos containing materials have been disturbed. But OSHA also has found that the workers who actually disturb these materials will probably require respiratory protection to comply with the .02 f/cc PEL. This conclusion was reached by OSHA's Office of Respiratory Analysis and may provide the trigger to protect workers through respiratory protection and building occupants and visitors by use of vacuums, wet methods, etc., IF they are aware that the material being disturbed is, in fact, an asbestos containing product.

This is the missing link in all of the health and safety reports, conferences, regulations, etc.

The best protection available is totally inadequate when not in use; and it is not in use simply because those being exposed are not being informed that asbestos is present.

This practice must cease and the warning must come in the earliest stages of the bid documents so that all of those involved - architects, engineers, project managers, employers, and most importantly, the workers - will be forewarned of any dangerous products which they will be working with or disturbing.

Another point I would like to raise is from my testimony before the House Subcommittee On Health and Safety 11/10/87, just under a year ago. Chairman Gaydos was quite concerned with short-term exposure incurred by workers who were being exposed for two hours here, a few hours there, on a continuing basis. The chairman said he would cite this "dangerous practice" to the Secretary when he came in to testify. Mr. Gaydos further remarked, "it's one that they call short-time duration, but it's probably the most dangerous."

I believe the chairman was exactly right. Historically, in our industry the four-to-ten person shops - which are vast majority - make their livelihood, as do our members, in the rehabilitation market where this exposure is being incurred.

There are many more documents I could quote and arguments to make for continuing to strengthen the "rules and regulations" for working with and around asbestos containing products. But they will not improve the situation as long as our ignorance of the existence of these products prevails.

I consider Mr. Gaydos a capable and sincere chairman and here we are a year later and I'm still quoting OSHA's estimate of 260,580 renovation and maintenance workers being exposed at levels above the PEL.

The wheels of government grind slowly as does the punishment inflicted on our members by the slow, insidious latency period associated with asbestos-related diseases.

The unknown and, therefore, uncounted numbers of victims among the building occupants and visitors are further reasons for concern. Ignorance begets ignorance.

As we unwittingly victimize ourselves, we inflict this same disservice on all of those we leave behind.

OSHA offers the construction worker with a known asbestos exposure a program of medical surveillance. What do we offer those unfortunate enough to be in the proximity of these disturbances?

Your legislation should rectify this problem so that we all know of the dangers we face.

With this last link forged into all of the protective methods being offered, or proposed, the exposure should be vastly reduced with the potential of being eliminated.

My Association and I, on behalf of our families and the general public, urge you "to require the EPA to set standards for identification and abatement of hazardous asbestos in certain buildings, and for other purposes."

Note: I have just received a copy of the preamble to OSHA amended asbestos standard setting excursion limit for construction, general industries (53 FR 35610 September 14, 1988).

It states that in the June 20, 1986 revised standards, OSHA reduced the 8 hour time weighted average (TWA) permissible exposure limit (PEL) to 0.2 f/cc but did not issue a short term exposure limit (STEL) or excursion limit for exposure to these materials.

While I have not had the opportunity to absorb this material, it could well be a step in the right direction.

TABLE 12.—FEASIBILITY SUMMARY TABLE FOR CONSTRUCTION: PROJECTION OF WORKERS EXPOSED BELOW AND ABOVE 0.2 f/cc FOLLOWING THE PROMULGATION OF THE STANDARD AND THE ADOPTION OF ENGINEERING CONTROLS AND WORK PRACTICES

Industry sector	Total No. of asbestos-exposed workers [1]	Projected No. of workers exposed to asbestos levels below 0.2 f/cc	Projected No. of workers exposed to asbestos levels above 0.2 f/cc [1]
New construction	29,320	27,118	2,208
Abatement	81,395	13,889	67,506
Demolition	34,495	3,899	30,478
Renovation	120,760	51,260	69,499
Routine maintenance in commercial/institutional building	217,745	134,185	83,560
Routine maintenance in general industry	259,643	175,053	84,590
Total	764,228	395,193	361,885

[1] Excludes small short duration jobs with negligible exposures.

Source: U.S. Department of Labor, OSHA, Office of Regulatory Analysis.

Primary Manufacturing

The production of the primary asbestos products can be divided into receiving (unloading, transporting, and storing the raw asbestos fiber), fiber introduction, and processing (mixing, drying, and finishing). The best available control technology consists of a combination of extensive local exhaust ventilation and a diligently enforced, comprehensive program of work practices and housekeeping. The automatic bag opening equipment, which is used in some sectors, is an example of the technology currently available to minimize asbestos exposures during fiber introduction. In several sectors, some finishing processes are completed with the use of water spray to reduce airborne levels of asbestos.

Two manufacturing steps that all primary asbestos product manufacturers have in common are the receipt of asbestos shipments and the introduction of asbestos fiber into the process. Due to the universal use of these steps throughout the industry as well as the large potential for release of asbestos fibers, a qualitative discussion of these steps is presented below.

Raw asbestos is shipped to manufacturers via railcar or truck. Manufacturers usually receive from 25 to 50 bundles of 100-pound bags of raw asbestos fibers. The packaging of the asbestos varies, but loose fibers or fibers pressed into bricks are usually wrapped in plastic or Kraft (TM) paper bags. These bags are transported on pallets that are constructed with high shear-resistant glue to prevent movement during shipping and handling. The entire bundle of asbestos bags is often shrink-wrapped with plastic to further reduce the potential for fiber release.

When trucks or railcars arrive at the plant, they are opened and examined for damaged bags. If any major damage is found, the entire shipment is returned to the supplier. Any minor damage is repaired by vacuuming the spilled fiber and sealing the broken bag with tape. The pallets are removed from the railcar or trailer by forklift and are stacked in the storage area [Exhibit 335].

Due to prudent work practices and recent improvements in the packaging of asbestos fibers, OSHA has determined that it is feasible for primary manufacturers of asbestos products to receive and store shipments of asbestos without experiencing exposures above the PEL of 0.2 f/cc. According to Marsden Hutchins of Quin-T Corporation:

> . . . fiber as now received lends itself to dust-free storage. Care in handling to avoid and/or clean up after accidental bag breaks makes this a relatively trouble-free area. [Exhibit 91–16, Section J, p. 17.]

Data provided in Dr. Gordon Bragg's feasibility report [Exhibit 235–A, Table III] indicate that an A/C pipe manufacturing plant with the best available technology and stringent work practices experienced a mean TWA of 0.05 f/cc during the reception and storage of asbestos shipments.

In addition to receiving and storing asbestos fibers, all primary manufacturers of asbestos products share the fiber introduction step. OSHA has concluded that it is feasible for this processing step to be completed with exposures below 0.2 f/cc. This conclusion is supported by data presented by the Research Triangle Institute (RTI) from its 1984 industry survey. In the RTI survey, exposures during fiber introduction ranged from 0.07 f/cc to 0.2 f/cc (see Appendix C of the Regulatory Impact Analysis).

The introduction of asbestos fibers to the manufacturing process begins with the transportation by forklift of the pallets of asbestos bags to the head of the production line. There, depending on the product line, the bags are sent either unopened to the mixing stage or are cut open and the asbestos is dumped onto a conveyor to be carried to the mixing stage. When unopened bags of asbestos enter into the process, exposure levels are not a problem in the introduction step. In written testimony, Mr. Hutchins indicated that only 5 percent of Quin-T Corporation's production of asbestos paper and gaskets required the asbestos paper bags to be opened prior to mixing [Exhibit No. 91–16, Section J, p. 5]. Asbestos bags packaged in polyethylene are not always opened in the production of asbestos/vinyl flooring or asbestos-reinforced plastics.

When the bags must be opened, either automated or manual debagging operations are used. Exposures at automated debagging stations have been measured to be less than 0.2 f/cc [Exhibit 235A, p. 101]. It has also been demonstrated that manual debagging operations have had exposures below the proposed PEL of 0.2 f/cc. Dr. Bragg reported an 8-hour exposure of 0.07 f/cc for the operator at a manual debagging station. He also cited an article by First and Love in which exposures at a manual debagging operation were measured to be 0.047 f/cc or lower for seven samples [Exhibit 235–A, p. 101]. Thus, OSHA has determined that it is feasible for both manual and automated debagging operations to reach exposures below the proposed PEL.

Asbestos-Cement Pipe

Data submitted to the record indicate the ability of most work stations at well-controlled A/C pipe plants to reach levels below the PEL of 0.2 f/cc except during the coupling cut-off operations. The basic steps in the manufacture of A/C pipe are fiber introduction, materials mixing, pipe forming, curing, and finishing. To reduce exposures throughout the A/C pipe manufacturing process, work practices and engineering controls have been applied to work stations as described below.

Following fiber introduction, the asbestos is carried through various processing steps by conveyor belt. The use of pneumatic conveying systems kept under negative pressure, along with local hood exhaust dust-control systems, has virtually eliminated the possibility of exposure at this stage of processing.

While being conveyed through the processing steps, the fiber is fluffed and blended and then thoroughly mixed with specific amounts of Portland cement, silica sand, and reprocessed scrap. The processing and dry mixing of the ingredients take place automatically in closed blending tanks which are maintained under a slight negative pressure by local exhaust ventilation to minimize worker exposure.

Following the dry mixing process, water is added and the resultant slurry is processed through a pipe making machine known as a "wet machine." The wet machine deposits a homogeneous mixture of the slurry in the form of a thin lamination onto a conveyor. The layer of wet asbestos cement is then conveyed to the press

TESTIMONY OF
THE LABORERS' INTERNATIONAL UNION OF NORTH AMERICA
SUBCOMMITTEE ON HAZARDOUS WASTES AND TOXIC SUBSTANCES
U.S. SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

TUESDAY, SEPTEMBER 27, 1988

Mr. Chairman and Members of the Subcommittee:

The Laborers' International Union of North America, AFL-CIO (LIUNA), appreciates the opportunity to comment on S.981, S.1809 and S. 2687, bills that address the issue of asbestos in Federal and commercial buildings.

LIUNA strongly endorses the efforts of the Subcommittee to deal with this serious danger to the occupants of these buildings, to the workers engaged in asbestos abatement and demolition work in these buildings, to the workers engaged in maintenance activities in these buildings, and, to the general public.

Our union has this strong interest because it is our members and their families who are at high risk of harm from the dangers of asbestos. LIUNA represents more than 500,000 workers. Approximately 350,000 are directly involved in construction work and the remainder are in various Federal and State public employment, service work and industrial activities. Thus, our members confront asbestos as occupants of Federal and Commercial

buildings, maintenance employees of these buildings, and as construction workers called upon to remove, repair and encapsulate asbestos or to engage in demolition and reconstruction of the properties.

At the outset of this testimony, we wish to make clear that there is every reason to include Federal and commercial buildings in the EPA regulatory scheme for control of asbestos. The case for such action is well documented. The EPA Public Building Study released earlier this year established the seriousness of the problem and therefore, we do not agree with the Administrator's recommendation for inaction as we believe that the resources are available to confront the problem now -- not later. There is no excuse for not taking action with respect to all buildings used by the public whether Federal or commercial.

We fully supported the efforts to pass AHERA and we have been active with other labor organizations in the effort to ensure that the final AHERA regulations provided strong direction, enforcement and, most of all, protection for those who will be in contact with this dangerous substance.

Today we would like to concentrate our testimony on the need for any legislation to include full and complete worker protection standards, including detailed training requirements for contractors and workers. We are very concerned that inspections and removal be done by competent and qualified persons and we think it essential that legislation contain detailed standards governing any repair or removal of asbestos. In this regard, S.981 and S.1809 contain provisions for contractor accreditation but not certification of asbestos abatement workers. We believe that any legislation must include detailed provisions for supervisor and worker training as well as for inspectors, management planners, and contractors.

The asbestos abatement industry is yielding and is sure to yield many jobs in the future for laborers. As an International Union, while always interested in ensuring jobs for our members, of equal importance is to ensure that these workers are <u>properly trained and certified</u> to perform asbestos abatement work thereby protecting the public, themselves, and other workers.

We are vitally concerned because many of our members in the past have become victims of asbestos related disease due to the lack of adequate protection for their health when working with this deadly substance. We are currently trying to address these health needs and to ensure that Laborers working today and tomorrow will, through proper training and surveillance, not be faced with the health effects that many of our retirees and older Laborers currently experience. Simply put, we are determined not to see this situation repeated.

LIUNA has been recognized nationally as the Union which performs this asbestos abatement work. In large measure, this flows from the fact that we are the craft which is chartered to perform wrecking and demolition work as well as the clean-up on construction. And, we are also the craft of general workers who are employed in virtually every branch of the construction industry. Increasingly we are being recognized specifically as the asbestos abatement worker.

One has only to read the local papers or watch television news programs to observe some of the chaos and danger presented to workers and the public from the use of untrained workers in handling asbestos abatement. Our concern for this problem has recently led us to join with our contractor representatives in the Laborers-Contractors Cooperative Trust for the Asbestos and

Hazardous Waste Removal Industry, a joint management trust fund under the Taft-Hartley Act to work together on matters relating to securing strong asbestos abatement and toxic cleanup laws and regulations, education of workers and contractors, and enforcement of existing abatement regulations.

Training of asbestos abatement workers is coordinated through the Laborers'-Associated General Contractors' Education and Training Fund. This Fund, located in Pomfret Center, Connecticut, is a joint union and contractor trust fund organized under the Taft-Hartley Act. The National Fund serves as the umbrella training program for approximately 70 local labor-management training programs. It is the National Fund that develops the curriculum and course materials used by these local funds in training more than 20,000 Laborers annually.

We have been engaged in training workers for asbestos removal for nearly a decade. In the beginning we did not understand all of the problems involved in asbestos removal and our initial training was fairly primitive by today's standards. During those early years we concentrated on respirator training and spent some time on containment instruction. For many years our course was a two day training program.

Three years ago, faced with the increasing technological demands of this work, and concerned about long range health protection for our members, we embarked on a complete revision of the initial course. Through our New England Laborers Training Fund we engaged the services of industrial hygiene and medical experts and we took a close look at both the methodology of teaching as well as the course content of our training program. As a result of that effort, we have developed a training course for workers that is presently a four day, 32 hour program. The course has been approved by the Environmental Protection Agency (EPA) under its new AHERA regulations. We have also developed a supervisor training program and we are well underway in developing an inspector program.

We believe the contents and requirements of this course represent the absolute minimum necessary for proper worker protection training. Frankly, we believe that in the near future we may have to consider a 40 hour course -- or more -- to keep up with the emerging technology in this area.

In LIUNA's efforts to provide a uniform course to local Funds, we have trained more than 100 instructors representing 50 local training funds. In this next year we would expect to train more than 10,000 workers nationwide in asbestos abatement. In short, we are confident that we can meet a substantial portion of

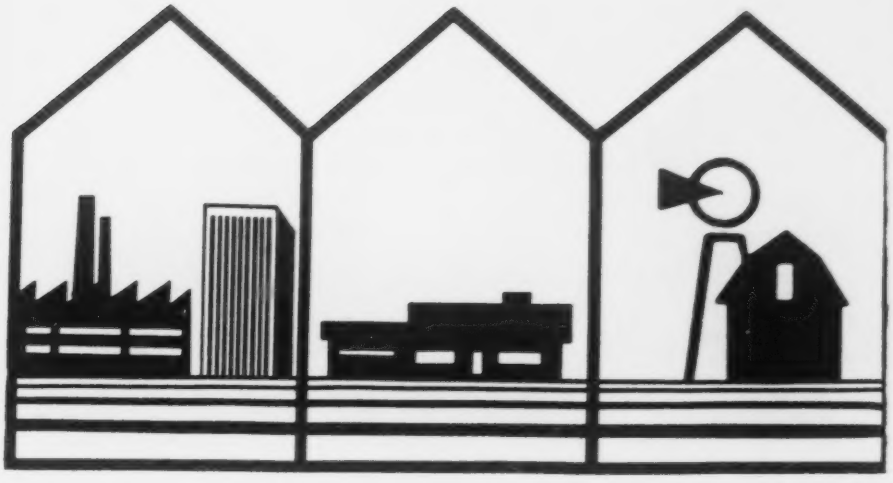
the demand for properly trained workers whether in schools, Federal or commercial buildings.

We participated in the negotiated rulemaking committee that developed the regulations under AHERA, and also provided substantial input to EPA for its Model Accreditation Plan. While we are not fully satisfied with that Model Plan, we believe it has many of the essentials required for training, particularly with respect to the curriculum requirements, course and trainer approval, and examination and certification requirements. We think that much of the AHERA program for training, accreditation and certification can be made applicable to these proposals. In this regard the Subcommittee may wish to take note of the recent introduction of similar legislation by Congressman Florio which contains rather specific training and certification provisions. We would be pleased to work with the Subcommittee in framing these proposals and we will be happy to provide copies of our training materials to the Subcommittee as well as to demonstrate our training program to you.

Dealing with asbestos is dangerous whether the quantities are large or small. Therefore, we believe that accreditation, training and certification requirements should apply to operations and maintenance work as well as abatement work involving removal, repair or encapsulation. The trend towards treating routine operations and maintenance as requiring little

or no training of workers is wrong. Education and awareness training as specified in the proposed bills is fine, but the legislation must make clear that any work with asbestos, no matter how minimal, must be done by a trained worker. Frankly, we believe that every worker who has any contact with asbestos should have the full training program. However, at the very least, the AHERA requirements, including those that require 16 hours of training for small repairs, must be followed by the operation and maintenance personnel.

Mr. Chairman, the time for study is over and the time for action has arrived. Enough is known to demonstrate that the asbestos problem in Federal and commercial buildings is serious and requires immediate action.



Statement of the

NATIONAL ASSOCIATION OF REALTORS®

THE WORLD'S LARGEST TRADE ASSOCIATION

TO: SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
SUBCOMMITTEE ON HAZARDOUS WASTE AND TOXIC SUBSTANCES

SUBJECT: S. 981 AND S. 1809, PROPOSALS TO ABATE ASBESTOS FROM PUBLIC BUILDINGS

DATE: SEPTEMBER 27, 1988

WRITTEN STATEMENT OF THE
NATIONAL ASSOCIATION OF REALTORS®
ON S. 981 & S. 1809
BEFORE THE
SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE
SUBCOMMITTEE ON HAZARDOUS WASTE AND TOXIC SUBSTANCES
SEPTEMBER 27, 1988

I. Introduction

On behalf of the more than 800,000 members of our Association, I would like to take this opportunity to present our views on S. 981 and S. 1809, legislation to abate asbestos in buildings. The Institute of Real Estate Management (IREM) and the Society of Industrial and Office REALTORS® (SIOR), affiliates of the NATIONAL ASSOCIATION OF REALTORS® (NAR), are particularly interested in asbestos abatement legislation. The Institute of Real Estate Management has 8,700 members who manage 8.9 billion square feet of building space.

Congressional interest in protecting workers and building occupants from the dangers of asbestos fibers is to be commended. We are all concerned with ensuring that the buildings where we work are safe. We believe that concepts relating to cost-effectivness, efficiency and respect for private property rights can go hand in hand with attempts to protect human health and the environment from exposure to asbestos fibers. We are interested in ensuring that any asbestos policy — state, local, or national — provides building owners with maximum flexibility in protecting building occupants. However, we believe that several issues must be resolved prior to consideration of a federal asbestos in buildings program. First, a greater understanding is needed as to what levels of asbestos fibers building occupants are routinely exposed to, and what health risks are posed due to that exposure. The recent Environmental Protection Agency (EPA) study (Asbestos-Containing Materials in Public Buildings — A Report for Congress) stated that EPA's analysis of the air in 43 federal buildings showed no difference existed between levels of

airborne asbestos fibers found in buildings with asbestos-containing material and outdoor ambient levels. Another EPA analysis showed that the mean level of asbestos fibers in a 94 non-school building study was .006 fibers/cc, far below the Occupational Safety and Health Administration (OSHA) standard of .2 fibers/cc. These surveys, of course, are far from conclusive. However, events are taking place which will shed additional light.

The NATIONAL ASSOCIATION OF REALTORS® is excited about several research initiatives that will provide Congress and the public with answers about what kind of national asbestos abatement program is needed. A major effort will be conducted by the Health Effects Institute (HEI) and will be aimed at determining the actual airborne asbestos levels prevalent in buildings and the impact of various management and abatement strategies on airborne asbestos levels. Those who have extensive expertise in dealing with asbestos in buildings will critically review asbestos research and will strive to reach a consensus on exposures to asbestos fibers in buildings and the potential health significance of those exposures. A large number of real estate groups (including NAR) financial institutions, and labor unions are jointly sponsoring the HEI research effort. An effort will also be underway by the Homer Hoyt Institute to calculate the effect of asbestos on property utility, loanability, and insurability.

We think that Congress itself needs to take a more careful look at the actualities of building occupant exposure. Even throughout the process leading up to the enactment of the Asbestos Hazard Emergency Response Act (AHERA), relatively little testimony was presented to Congress by the scientific community on the actual exposure by building occupants to asbestos. We believe this subcommittee should plan several days of hearings in order to closely examine the latest scientific thinking on building occupant exposure. Careful scrutiny of the scientific data will assist in determining <u>how</u> asbestos-containing materials should be controlled, not <u>if</u> they should be controlled.

II. Preparation for a National Asbestos Abatement Program

To avoid the situation as we have seen reported from New York, with illegal, improper removal and disposal of asbestos from buildings, the proper asbestos "infrastructure" must be in place before enactment of comprehensive legislation/regulations. Inspectors, labs, and abatement contractors should be trained, certified, and plentiful if commercial buildings are to be subject to federal law/regulations for asbestos. Transportation and disposal regulations and availability of waste sites should also be addressed prior to any federal program going into effect. EPA should be appropriately funded to ensure that adequate staff is available to handle enforcement, the deluge of questions, and the many problems that a national abatement policy would bring about.

Most importantly, before proceeding with any kind of asbestos in buildings legislation, Congress should take advantage of the unique opportunity that presents itself in the public policy arena by conducting full oversight hearings on the implementation of the AHERA legislation and regulations. Testimony before Congress regarding availability of certified contractors, adequacy of training, adequacy and type of abatement recommendations, differences between contractors' recommendations, costs, the affect of abatement on indoor air quality, etc., could provide valuable insights and allow Congress to modify buildings legislation to correct past deficiencies and to simplify or eliminate redundant or unnecessary steps. Rarely does Congress have such an opportunity to evaluate a "model" program, such as AHERA, so that improvements can be made to any follow-up legislation. Because S. 981 and S. 1809 track the AHERA legislation and regulations so closely, we believe that Congressional oversight and the lessons learned from the AHERA experience could play a crucial role in the development of an asbestos-in-buildings policy that protects public health and is workable and manageable by all parties involved.

III. Legislative Concepts

NAR believes that the AHERA type of approach, as proposed in S. 987 and S. 1809, is only one of many options available to minimize worker and occupant exposure to asbestos fibers in buildings. Much controversy surrounds the AHERA approach to asbestos abatement. A central theme which requires further examination is whether indoor air standards are an appropriate mechanism by which to judge how significant a health risk is posed by asbestos-containing materials. Are visual inspections under AHERA adequate enough to predict the likelihood of fiber release? What are the health and practical implications of having a clearance level in AHERA, but no level to determine whether or not abatement might be appropriate? Under what circumstances might air monitoring be used to detect unacceptable fiber levels? NAR believes that serious Congressional oversight on AHERA, and conclusions of new research and policy efforts in the near future will help resolve many of these issues in the minds of Congress and the public at large and will help produce a viable asbestos control program. Once this data is available, Congress will be in a position to determine which approach is the best way to protect public health in a cost-effective manner.

We did want to raise some additional questions, although somewhat ancillary to the major focus of S. 1809, so the Committee can consider these modifications to any future legislation.

The definition of federal buildings needs further clarification, either in the legislation or in report language. We assume the variety of HUD-assisted properties are not to be included under this definition. Program management, costs, and logistics of applying such legislation and regulations to this portion of the nation's building stock would be extremely difficult. Additionally, such buildings would be more sensibly covered under future legislation/regulations that may affect private buildings.

We believe the 360 day deadline for promulgation of the final rule by EPA is too short. The proposed rule has to be out in six months, and we think the impacts of this legislation warrant a far more careful consideration and promulgation of a rule than the rapid pace which characterized the AHERA negotiated rulemaking. A deadline that is too tight will force EPA to take the cookie cutter approach and apply the AHERA regulations to buildings; and as our testimony indicates, this approach may not be the optimal one.

We are concerned with the provision requiring building owners to maintain a copy of the asbestos management plan for public inspection. While we believe building occupants are entitled to information regarding the existence of hazards due to asbestos fibers, we question the necessity of providing each member of the public the opportunity to examine how asbestos-containing materials in the building are being managed. Many management and maintenance aspects of a building are considered proprietary. Just as pharmaceutical and manufacturing concerns must keep certain information out of the public domain, so too are building owners concerned about building condition and management information being furnished to those who do not have a legitimate interest in the particular building. The EPA and state officials will have oversight and enforcement authority and will have copies or access to the management plan. There are many aspects of the bill which ensure worker and occupant safety, and ensure that workers and occupants are kept informed. Building occupants will have access to the operations and maintenance plan where they can learn about the details of all asbestos abatement procedures. For these reasons we believe the Committee should reexamine the flow of information and direct it only to those who are significantly affected by asbestos-containing materials in a particular building.

We believe the Committee should also review the status granted the EPA document "Guidance for Controlling Asbestos Containing Materials in Buildings" (the so-called "Purple Book") throughout the bill. Remember this document was

put together by an EPA consultant without any kind of formal public review. In S. 1809 the document is sometimes viewed as gospel and other times as something the Administrator can simply override. Provisions in Sec. 305 (1) and (2) would require building owners to abide by the Purple Book if the EPA Administrator is late in promulgating regulations, or if a court finds it necessary to delay implementation. We do not think this kind of "hammer" is an appropriate means to regulate asbestos in buildings. Building owners may be subject to asbestos inspection and abatement according to the Purple Book for two months and then may have to switch back to new EPA regulations after a judge has determined the outcome of the suit. To subject building owners and occupants to several asbestos strategies within a short time period is unfair, costly, and would shake the public's confidence in the ability of the federal government to adequately manage an asbestos abatement program. We realize that there may not be differences in a particular asbestos abatement program whether it was done according to the Purple Book or to new EPA regulations. However, there could be some significant differences, depending on the condition of the asbestos.

Finally, contractor accreditation provisions in the bill are crucial to developing a cadre of qualified technicians that can competently apply the EPA regulations to the safe abatement of asbestos problems. However, we believe since the entire asbestos management program is based on the quality of inspectors and contractors, Congress should strengthen requirements for experience, education, and training. While this may have a temporary adverse affect on the supply of trained asbestos contractors, and cost of abatement, we believe the long-term benefits to the asbestos program are well worthwhile.

IV. Conclusion

We look forward to 1989 as a year of great activity in the asbestos policy area. Conclusion of some major research initiatives, lessons learned from

AHERA oversight, and serious debate on policy options, should enable Congress, EPA, and the various interest groups to develop a solid national strategy for addressing the asbestos problem in a manner which protects public health based on sound, scientific principles. The NATIONAL ASSOCIATION OF REALTORS® and its affiliates look forward to working with Congress on this important public health issue in the 101st session.

Respectfully Submitted,

Nestor R. Weigand, Jr.
President

STATEMENT OF PFIZER INC.,
BEFORE THE SUBCOMMITTEE ON
HAZARDOUS WASTE AND TOXIC SUBSTANCES
OF THE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
UNITED STATES SENATE,

September 27, 1988

Mr. Chairman and members of the Subcommittee, we are in-house counsel for Pfizer Inc., a large pharmaceutical and chemical manufacturer, and are grateful for the opportunity to provide this statement in support of S. 2687.

Pfizer is just one of many other members of the community, including governmental entities, the courts, businesses, and private individuals, who are trying to grapple with the asbestos problem in a reasonable, safe, and just manner.

Asbestos buildings litigation has grown substantially over the past six years, and is likely to grow more. The method suggested by Senators Chafee, Baucus, Stafford, and Durenberger in S. 2687 offers an opportunity to alleviate some of the waste of resources and clogging of court dockets that attends this litigation in two ways:

- By simplifying large, multi-defendant lawsuits; and

- By eliminating the necessity for building owners to seek relief from ten or thirty, or 100 defendants when in fact only half a dozen or fewer may actually be involved.

S. 2687 is consistent with and complementary to the measures such as the Asbestos Hazard Emergency Response Act (1986) already passed by the Congress to address the problem of asbestos in buildings.

What S. 2687 Does

S. 2687 represents a way to serve the courts and all interested parties. The bill has as its primary goal the dissemination of information about specific products in specific buildings. And in the context of pending building cases, it will serve to reduce transaction costs dramatically by providing plaintiffs the means by which they can identify only those manufacturers who should be in a case instead of

wasting immeasurable time and money in suing countless manufacturers, suppliers, etc., who have nothing to do with a case.

The bill will require that:

1. Manufacturers of asbestos or asbestos-containing material submit to EPA the years of manufacture, the types or classes of product, and, to the extent available, other identifying characteristics reasonably necessary to distinguish their material from others. (They may also submit protocols for the taking and testing of their materials); and

2. EPA publish the product information to make it freely and widely available to building owners to assist them in identifying the manufacturer or product class of each type of asbestos-containing material in their buildings.

By requiring manufacturers to disclose their products' unique identifying characteristics, the bill requires them to do no more than they will have to do eventually in each case anyway, but makes them do it earlier and do it only once.

The impact on building owners is twofold. First, in pending cases, it can speed up the process of product identification that must be completed before a case can be resolved. Secondly, and perhaps more significantly for the future -- especially if asbestos abatement efforts extend beyond schools to commercial and other buildings -- availability of product identification information will enable building owners to assess the cases and focus their claims more narrowly by eliminating from consideration all but the smallest group of plausible suspects <u>in advance of suit</u>.

S. 2687 does <u>not</u> purport to identify the suppliers of all asbestos-containing materials in all buildings. It may have that effect in some cases. What it is designed to do is to assist in <u>ruling out or eliminating</u> some suspects so that only the manufacturers whose products might actually be in a building will become or remain as defendants. This might include three or four suspects for each product, but that will be an improvement over a suit against 10 or 20 or 50 manufacturers whose products can be shown <u>not</u> to be present. Under S. 2687, those excess defendants can be dismissed more quickly or, ideally, not sued in the first place.

With product identifying characteristics available to building owners, their claims can be readily simplified in the light of a few readily demonstrable principles:

1. Most buildings contain, at most, only a relatively small number of asbestos-containing materials.

2. The presence of asbestos in a product is readily determinable, the amount is measurable, and the various types of asbestos can be distinguished from each other.

3. The class or type of a product -- pipe insulation, fireproofing, acoustical plaster, ceiling tile, etc. -- is readily determinable and can be used to eliminate defendants who did not manufacture that class or type.

4. The composition of most asbestos products is generally uncomplicated, consisting principally of half a dozen or fewer common, readily identifiable mineral ingredients such as lime, gypsum, fiberglass, vermiculite, cellulose, etc.

5. The principal ingredients in most products can be identified, quantified, and distinguished from each other, often using high school chemistry techniques.

6. Most products can be identified or distinguished from each other without a complete analysis of all ingredients, and without reference to specialty or trace ingredients.

7. Specialty or trace ingredients can be used, if necessary, to make fine distinctions. They can be identified and quantified with more sophisticated and costly techniques, but need be utilized only after significant eliminations of suspects have already been made with less expensive techniques. These last rounds of eliminations can be left to the remaining parties to a lawsuit to do themselves.

For example, if in a particular building the only material containing asbestos is acoustical plaster, then defendants who did not manufacture acoustical plaster can be eliminated immediately, or not sued in the first place. If a sample of the plaster from the building shows that it has a lime base (which can be readily and cheaply determined), then manufacturers who made only gypsum or portland cement-based plaster can be eliminated, without reference to other ingredients that might have been used or whether the quarry from which the principal ingredients came contained traces of various specific minerals. If the sample contains vermiculite or perlite, which are also readily discernible, then manufacturers of lime-based plaster that included no vermiculite or perlite can be eliminated without reference to possible differences among vermiculite deposits.

Thus, knowing only a few of the most basic facts about the material that is in the building, and knowing the identifying characteristics for products of that type, the number of suspects can be narrowed from, say, 60 or more to two or three. Those two or three remaining suspects may then have to turn to electron microscopy, x-ray diffraction, spectrographic analysis, or some other, more sophisticated and more expensive means to make the finest distinctions for the purpose of identification; but those last rounds of eliminations can be better carried out in a case involving three defendants than 60.

This bill will not resolve the whole asbestos buildings litigation problem. It will not necessarily identify the suppliers of asbestos materials in each case. But it will narrow the field by eliminating some or all of those who are not suppliers, quickly, surely, and economically. To save a substantial proportion of otherwise wasted transaction costs, to bring these disputes to a prompt resolution, and to unclog the courts, this bill goes a long way, and at virtually no cost to the Government.

Asbestos Buildings Litigation

Asbestos buildings litigation began with a few cases filed in the late 1970s, followed by the filing in 1982 of a group of cases that became the National School Class Action. That case alone covers some 33,000 public and private elementary and secondary schools throughout the country. Since 1982, there have been asbestos building cases filed by state and local governments and government agencies, hospitals, colleges and universities, commercial building owners, homeowners, and individual school districts that have opted out of the National School Class Action. These cases, which are over 200 in number and are pending in almost every state in the country, involve literally hundreds of thousands of buildings (including bridges and tunnels). Federal and state courts have been struggling to create and implement procedures to streamline and manage these cases.

The cornerstone of this litigation is product identification. In the context of asbestos buildings litigation, the general principle requiring plaintiffs to identify the allegedly offending product still obtains. Thus, before plaintiffs can recover damages from any particular defendant, they must demonstrate a nexus between the claimed injury and the responsible supplier.

Typically, because plaintiffs often do not know what specific products are in their buildings, they sue 20, 40, 50 or more defendants and begin protracted and agonizing discovery procedures against each of the defendants to try to find out what products they made and whether they are in their

buildings. The defendants then undertake their own discovery procedures, often entailing years of motion practice in the courts, to demonstrate that their products are not in the plaintiffs' buildings. The expenditures of time and money serve neither the plaintiffs nor the defendants. Rather, it benefits only the lawyers involved. The result is a mess.

In the two dozen or so cases that have been tried or settled to date, all have involved fewer than six defendants' products in any given building. Thus, right from the beginning there are 40 or 50 or more defendants who have no business being in the case. With separate counsel for each of the defendants, a great deal of money is poured into the cases, having nothing to do with the asbestos in the buildings, but directed instead to finding out who the defendants should be.

Many of the asbestos property cases have been pending for as long as six years. To date, about a dozen cases have been tried to a verdict nationwide, and perhaps three or four times as many more have been dismissed or settled. The result is that, apart from a few plaintiffs' trial victories and few settlements, all the rest of the expenses, by nearly 100 defendants, in 200 or more cases, involving thousands of buildings over an average pendency of three or four years, have been transaction costs. A substantial proportion of these transaction costs have been devoted to the question, "Whose products are in the building?"

This questions is being answered in a piece-meal fashion. Various courts have required manufacturers to disclose their product formulas.

For example, in the Mercer University case in Federal Court in Georgia, Judge Alaimo ordered plaintiffs to take and preserve samples of suspect materials from their buildings; the samples were analyzed; the defendants were required to disclose their formulas; the analyses and the formulas were matched up, and the mismatched defendants were dismissed from the case, reducing the field from over 50 to five defendants within a few months after the case was filed. Similarly, courts in the State of Maryland and the Minnesota State and Regents' Building Asbestos cases, have ordered production of product formulas, although only after protracted procedural litigation.

The results show that manufacturers have formulas and can provide them -- over 350 formulas in Maryland; unfortunately, however, in both the Maryland and Minnesota cases, formulas were provided under seal and thus are not available to the public or to other prospective plaintiffs.

Clearly, the information is available; and, clearly, the information is of critical importance. In some cases the building owners have documentation that can assist in identifying the suppliers, in other cases they do not, or the documentation is inconclusive, and they may not be able to find out who the suppliers were unless they analyze the products and compare the results to the manufacturers' product composition -- which they do not have. But without access to specific product information, they cannot readily eliminate any asbestos product manufacturer as a suspect. Moreover, because virtually all of the asbestos products were discontinued by the early 1970s, and were installed in the 1960s, 1950s or even earlier, documents and witnesses are no longer available.

On the manufacturers' side, they resist disclosing the identifying characteristics for the products, lest the information be used to prove the presence of their products in a particular case, or to prove a case (or many cases) against them elsewhere. They are equally reluctant to accept a shifting of a part of the plaintiff's burden of proof, that is, to disprove the presence of their product, especially where doing so would tend to establish a pattern for hundreds of other cases, and where the combined cost of sampling and analysis could run to several thousand dollars per building.

Nevertheless, product identification must eventually be settled. Why not do it sooner than later, after years of haggling in the courts? S. 2687 makes perfect sense. It saves everyone time, energy, money, and frustration. It says, let's settle this issue of product identification to the extent that we can and get on with the merits of the case.

It is not an exaggeration to estimate that nationwide several hundred million dollars have been spent on asbestos property litigation, more than 90% of which represents transaction costs, paid mostly to lawyers and consultants.

This kind of appalling waste is worse than that identified in the Rand Corporation study of asbestos personal injury litigation, where only two-thirds of the money spent went to lawyers and other transaction costs. Waste of this magnitude was inexcusable in the personal injury cases, it is inexcusable now, and it will become more inexcusable unless something is done to curb the litigation costs. Estimates of commercial and government buildings that could become involved are over 700,000, suggesting more than a 20-fold increase in litigation, with attendant court congestion and loss of efficiency.

Conclusion

There is clearly a need to deal with wasteful litigation in asbestos buildings cases. S. 2687 addresses that need, both at the current level of litigation, and at what are likely to be increasing levels in the future. To cut through all of this, S. 2687 would make product information available to everyone -- current and prospective plaintiffs, buildings owners, manufacturers, and the courts.

Under AHERA, passed in 1986, EPA has promulgated regulations that will require management and/or abatement of asbestos in schools and will undoubtedly call forth further litigation. If asbestos abatement spreads to commercial, office, and government buildings, as some have urged and many have predicted, then the volume of litigation will grow further. Without some means of controlling it, the courts will be swamped further; resolution of cases will be delayed further; and further millions of dollars will be dissipated in lawyers' fees.

We should not squander these resources -- but should use them to reasonably respond to the asbestos litigation problem that is draining our society's reserves on every level.

S. 2687 provides a way, finally, to put the litigation on the road to efficiency, and Pfizer supports it.

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COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

SUBCOMMITTEE ON HAZARDOUS WASTES
AND TOXIC SUBSTANCES

Hearings on the Control of Asbestos in Public Buildings

Statement of the
SAFE BUILDINGS ALLIANCE

September 27, 1988

The Safe Buildings Alliance (SBA) is pleased to submit this statement to the record of the Subcommittee on Hazardous Wastes and Toxic Substances' hearing on the control of asbestos in public buildings. Formed to promote a rational, scientific approach for responding to asbestos in buildings, SBA is an association of leading building product companies that formerly manufactured asbestos-containing materials. 1/ SBA has actively promoted efforts throughout the country to develop standards governing the management of asbestos-containing materials in buildings.

During the last two years, federal and state initiatives involving asbestos-containing materials in buildings have continued at an unprecedented pace. The next Congress -- and the new Administration -- will be called upon to use the information generated by these activities to formulate appropriate public policy for the future. In so doing, policymakers will undoubtedly reflect on three important considerations: (1) experience from implementing the Asbestos Hazard Emergency Response Act ("AHERA") for asbestos in schools; (2) the best available medical and scientific data concerning the actual exposures and risks presented by asbestos building materials; and (3) the importance of

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1/ SBA's members are the United States Gypsum Company, the Celotex Corporation, and W.R. Grace and Company.

objective, practical assessment standards -- including a non-occupational airborne exposure level -- in facilitating sound, responsible asbestos response actions.

Experience with the Asbestos-in-Schools Program

This Subcommittee held hearings jointly with the Subcommittee on Superfund and Environmental Oversight on March 15, 1988 to hear testimony on EPA's asbestos in schools program and the Agency's Report to Congress on asbestos in public buildings. The subcommittees learned:

(1) school districts, especially in rural areas, are experiencing profound logistical and economic problems with AHERA;

(2) there is an inadequate supply of accredited inspectors, management planners, supervisors and workers;

(3) as a consequence of the supply-demand squeeze, school districts are being price-gouged and EPA's $3 billion estimate for school response actions probably underestimates the true cost impacts by a factor of 3 times or more;

(4) abatement consultants say that EPA regulations are "confusing and inadequate" with "no scientific or engineering protocols for making the decisions;"

(5) EPA officials candidly admit that asbestos contractors continually violate laws intended to

prevent workers and the public from high risk abatement work; and

(6) state legislators caution that "the real threat is the potential for years of mismanagement of asbestos in schools."

Extension of the AHERA deadlines from October 12, 1988 to May 9, 1989 has provided a short-term respite for local educational agencies. However, the long-term impacts of EPA's regulations will not come into clearer focus until the first quarter of 1989 -- when the majority of management plans are submitted to designated state agencies. The Subcommittee may wish to have oversight hearings at that time to further examine schools' experiences implementing the new asbestos regulations.

EPA's Report to Congress

On the federal level, one of 1988's important contributions to the growing database of information on asbestos in buildings was EPA's Report to Congress on asbestos-containing materials in public buildings. 2/ The report, issued pursuant to the requirements of AHERA, describes EPA's analysis to date on the health risks presented by

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2/ EPA, EPA Study of Asbestos-Containing Materials in Public Buildings: A Report To Congress (Feb. 1988) ("Report to Congress").

asbestos in public buildings. In the report, EPA presents the results of its 1988 air monitoring survey of 43 Federal buildings located in six cities across the nation. That study, requested by Congress in 1985, reported "very low" mean fiber concentrations in the buildings monitored, even in buildings containing "significantly damaged" materials. Moreover, "preliminary results appeared to indicate no difference between levels found in buildings with ACM [asbestos-containing materials] and outdoor ambient levels." 3/

EPA's findings are in agreement with the best available data on building exposures. Studies have shown consistently that indoor asbestos concentration levels -- even in buildings containing damaged materials -- are indistinguishable from outdoor asbestos levels. For example, a 1986 National Institute of Environmental Health Sciences study concluded that "the average concentrations in the vast majority of buildings with asbestos as surfacing material do not differ significantly from background." 4/ The Consumer Product Safety Commission similarly found that indoor asbestos

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3/ Id. at 12 (emphasis added).

4/ Omenn, G., et al., Contribution of Environmental Fibers to Respiratory Cancer, 70 Envt'l Health Perspectives 51, 55 (1986).

concentrations in 45 private homes containing asbestos were "essentially not greater than background levels." 5/

Based on these low exposure levels, many expert groups have concluded that asbestos-containing materials in buildings do not present significant risks to building occupants. The United Kingdom's Health and Safety Commission, for example, announced in April 1985 that "the environmental health risk from asbestos in buildings is of an extremely low order." 6/ The British announcement accompanied the publication of a comprehensive assessment of asbestos risks by two distinguished epidemiologists from Oxford University, Sir Richard Doll and Professor Julian Peto. Doll and Peto concluded that the lifetime cancer risk for a person working in a typical asbestos-containing building for 20 years is but 1 in 100,000. They noted that the British Royal Society has classed risks of such magnitude as "negligible." 7/

5/ CPSC, Phase One Report of Asbestos-in-Home Monitoring Study 4 (Feb. 24, 1988).

6/ Health & Safety Commission, News Release, "Doll/Peto Report on Asbestos Published Today" (April 24, 1985). The U.S. Surgeon General agrees, noting in his report on smoking and health that "it is generally accepted that [exposures to asbestos near ambient levels] do not substantially alter the occurrence of lung cancer in the general population." U.S. Surgeon General, Cancer and Chronic Lung Disease in the Workplace 199 (1985).

7/ Doll, R. and Peto, J., "Asbestos: Effects on Health of Exposure to Asbestos" 47 (1985).

The Ontario Royal Commission had made similar comparisons in its 1984 report:

> [W]e deem the risk which asbestos poses to building occupants to be insignificant and therefore find that asbestos in building air will <u>almost never</u> pose a health hazard to building occupants. 8/

Other exposure studies and risk assessments have been summarized in SBA's testimony to this Subcommittee on March 15, 1988.

At the same time, research has also shown that even well-performed removals can <u>increase</u> asbestos exposure over the long run to building occupants and abatement workers

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8/ Report of the Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario at 14 (1984) ("Royal Commission Report") (emphasis added).

The same conclusion has been reached by Dr. Ronald G. Crystal of the National Institutes of Health in his recent monograph "Living with Asbestos:"

> Currently there is no evidence that the levels of airborne asbestos found in public buildings, such as schools, present hazard .... Outside of occupational exposures unless there are specific circumstances in which potential cumulative exposures can be demonstrated to be above "low levels," the present levels do not suggest that society is at risk.

Crystal, Ronald G., "Living with Asbestos," 69 <u>Encyclopedia Brittanica Scientific Yearbook</u> (1986).

alike. 9/ Of course, where removals are poorly performed or where workers are not adequately protected, exposures and health risks are magnified.

It is thus encouraging that EPA's Report to Congress apparently signals a new willingness on the Agency's part to assess the available studies on asbestos exposures in buildings and to develop the exposure database further. Noting that "the Agency does not have the data to produce a scientifically acceptable estimate of risk due to asbestos exposure in public and commercial buildings," the report recommends further research, including definitive studies to

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9/ See, e.g., Battelle Report for EPA, Draft Final Report on Task 2-8, Evaluation of Asbestos Abatement Techniques, Phase 3: Removal 4 (Mar. 1987) (finding that, in an EPA-sponsored study of a school district's asbestos removal program, asbestos exposure levels were lower "immediately after removal" but rose again after classes resumed to levels above pre-removal levels); Health and Safety Executive, Research and Laboratory Services Division, Airborne Asbestos Fibre Levels in Buildings: A Summary of U.K. Measurements 14 and figs. 2-5 (1987) (finding, after an air monitoring study of two buildings before, during and after removal, that asbestos levels in buildings after removals were higher than levels before removals: "When large areas of asbestos are removed from buildings, it remains difficult for the existing technology to control to the levels encountered during normal occupation. . . . On balance management rather than removal would appear to give the lowest risk at present, especially if the asbestos material is in good condition and has little physical disturbance."); Omenn, et al., Contribution of Environmental Fibers to Respiratory Cancer, 70 Envtl. Health Perspectives at 56 ("Asbestos removal is difficult to control, however, and in buildings in which average levels are low, the exposure to both workers and occupants caused by asbestos removal may actually increase the health hazard.")

determine "[t]he levels of prevalent airborne fibers in public and commercial buildings." 10/

Accordingly, Senate and House conferees appropriated $2 million for independent research "to determine actual airborne exposure levels prevalent in buildings, to characterize peak exposure episodes and their significance, and to evaluate the effectiveness of asbestos management and abatement strategies in a scientifically meaningful manner." This funding will be matched by contributions from current and former product manufacturers (including SBA's member companies), realtors, developers, building owners and managers, mortgage bankers, the insurance industry, labor organizations, and other private sources. 11/

In addition to recommending further study on the exposure levels prevailing in public buildings today, EPA's report also advises against immediate, AHERA-type regulation of public and commercial buildings. This recommendation stems from the Agency's conclusion that "basic questions

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10/ EPA, EPA Study of Asbestos-Containing Materials in Public Buildings: A Report To Congress (Feb. 1988) ("Report to Congress").

11/ H.R. Rep. 817, 100th Cong., 2d Sess. 15 (1988). An independent health research organization, the Health Effects Institute (HEI), has been selected by Congress to conduct this study. Meetings among EPA, HEI and other interested persons were held in July, August and October to discuss the initiative, and efforts are currently underway to decide upon a general agenda for the first year of research.

which could improve our response to asbestos in public and commercial buildings" have yet to be asked, let alone answered. It also reflects nationwide concern over the grossly inadequate supply of reliable, trained inspectors, management planners and abatement consultants, as well as fears that further expansion of the AHERA approach could dangerously exacerbate the shortage. Any significant increase in the demand for asbestos abatement will stretch currently available resources further, increasing prices and assuring that more work is done by ill-equipped firms. Recognizing this potential danger, EPA noted in its report that

> If we are not careful we will stimulate more asbestos removal actions in public and commercial buildings during the next few years than the infrastructure of accredited professionals and governmental enforcement can effectively handle. Unless such removals are done correctly, exposure of asbestos to the public may actually be increased. We already have anecdotal information which leads us to believe that irresponsible and potentially dangerous removal action is taking place outside of carefully monitored programs, and we do not want to exacerbate this problem by our actions. 12/

As the Alliance noted in testimony presented to this Subcommittee last March, the problem of unsafe, poorly performed removals is already critical. The burgeoning

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12/ EPA, Report to Congress, Letter to George Bush and James C. Wright, Jr. at 2.

business opportunities in the asbestos removal market have spawned hundreds of firms ill-equipped to conduct such dangerous activities. Even those states that have mandatory certification, training and detailed work practice rules for contractors and their employees have continually found evidence of shoddy workmanship and failure to comply with worker protection measures. A 1986 EPA poll of the Agency's asbestos coordinators showed that they believe as much as three-fourths of all asbestos abatement work is being conducted improperly. 13/ Similarly, a recent article in Fortune magazine notes that "[b]y some estimates, fewer than a quarter of [abatement] firms are competent." 14/ Knowl-

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13/ See the EPA description of this poll, reprinted in Asbestos Exposure: Hearings Before the Subcomm. on Commerce, Transportation and Tourism, House Comm. on Energy and Commerce, 99th COng., 1st & 2nd Sess. 96-106 (June 27, 1985 and March 4, 1986).

14/ Richman, L., "Why Throw Money at Asbestos?," Fortune (June 6, 1988). The article describes such incompetent abatement firms as

> so-called 'rip and skip' artists who yank the stuff out and disappear, often leaving behind a cloud of dangerous dust. Many experts reckon that careless removal can leave airborne asbestos levels three to four times higher than before the work was done. Lingering on week after week, the fibers may raise genuine health and legal issues. Says Charles Hardy, a senior manager of Reservoirs Environmental Services, a Houston testing lab: "There's nothing worse than a botched removal job."

edgeable contractors estimate that the percentage of unqualified removal firms may be as high as 90 percent. 15/ Cutting corners is common in this business -- especially when contracts are awarded to the lowest bidder. 16/

The incompetence of the private analytical labs that test building products for the presence or absence of asbestos is also startling. One out of seven labs failed to identify correctly 4 building material samples during a

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15/ The president of the National Association of Asbestos Abatement Contractors ("NAAAC") recently noted: "Giving the industry the benefit of the doubt, maybe 10 percent of asbestos contractors are qualified." Madison (Wisconsin) Capital Times, April 29, 1987.

A former NAAAC president agrees: "Some people do it right, but I've seen some abuses that would make your hair stand on end." Wall Street Journal, March 5, 1986 at 1 (quoting David Kimbrell).

16/ As one industrial hygienist experienced in asbestos work has already told EPA, quality control is often lacking on asbestos removal projects because:

> Most abatement projects are awarded to the lowest bidder, meaning that the successful offeror has "left money on the table." The natural tendency is to minimize costs to "recover" some of the "lost profit."

Comments of Andrew F. Oberta, P.E., CIH (Feb. 18, 1987).

Yet another well-known contractor notes: "Most people do their [asbestos removal] work shoddily, so they can bid it cheap. . . . I'd say the majority of people involved in asbestos cleanup are causing more problems than they're correcting." Anthony Natale, as quoted in "Questions But Few Answers," Washington Post, May 19, 1987 at H-15.

voluntary January 1988 "test" sponsored by EPA. Earlier rounds of testing were also disheartening -- in August 1987 only about a quarter of labs tested could identify the make-up of 3 out of 4 material samples.

Moreover, extension of AHERA to public and commercial buildings would be enormously costly. EPA estimates that AHERA will cost $3 billion, while schools estimate those costs to be $10 billion. A similar program for public and commercial buildings would cost $51 billion according to EPA, $250 billion according to some removal contractors, and up to $4 trillion according to the Building Owners and Managers Association.

In view of the staggering price tag attached to any expansion of AHERA -- not to mention the potential toll in human lives should unsafe or unnecessary removals be generated by the new program -- EPA's decision to study and evaluate its schools program before greatly expanding it to 3.6 million other buildings makes simple common sense.

State Legislative and Regulatory Developments

While Congress and EPA continue to struggle with AHERA and its ramifications, a number of policy initiatives have been undertaken at the state and local levels.

- **Worker/Contractor Training Laws**. Increasing numbers of states are requiring training and certification of abatement workers and contractors -- an important step in

ensuring that abatement actions will be performed safely and properly. In all, 32 states require licensing or accreditation of workers and contractors. 17/ Training requirements vary, but most states require both classroom and hands-on training, with examinations and annual retraining. 18/ Although many states, and some cities, are implementing training and licensure programs, both school officials and commercial building owners have complained about the "five day wonders" and have cautioned about the inadequate pool of truly qualified professionals.

17/ States requiring training of asbestos workers and contractors include Alaska, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Illinois, Iowa, Kansas, Maine, Maryland, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oklahoma, Oregon, Rhode Island, Texas, Washington and Wisconsin. Additionally, three other states -- Louisiana, Utah, and Vermont -- also require licensing or certification of contractors and workers.

Pursuant to AHERA, EPA periodically publishes a list of state accreditation programs approved by the Agency for asbestos-related work in schools. As of June 1988, nine states -- Alaska, Arkansas, Illinois, Kansas, Massachusetts, Michigan, New Jersey, Rhode Island and Washington -- had approved programs. See 53 Fed. Reg. 20066, 20068-71 (June 1, 1988).

18/ National Conference of State Legislatures, State Asbestos Programs Related to the Asbestos Hazard Emergency Response Act: A Survey of State Laws and Regulations at VIII (Jan. 1988).

State asbestos in building policies and asbestos have also undergone changes in other areas, including the following:

• **Specification of airborne asbestos exposure standards**. A number of states have adopted non-occupational asbestos exposure levels for building assessment and other purposes. California's standard of 0.01/cc and 300 ng/m³ is used for determining whether state schools are eligible for asbestos abatement funding. 19/ Rhode Island's 1986 interim indoor non-occupational exposure standard for asbestos is also 0.01 fibers/cc or 300 ng/m³. 20/ The 1986 New Hampshire General Court similarly set an indoor non-occupational standard of 0.01 asbestos fibers longer than 5 microns/cc, with electron microscopy measurements to prevail over optical microscopy results. 21/ In 1987, Florida passed

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19/ See A.B. 2509, California Legislature, Reg. Sess. (Mar. 6, 1987; amended Sept. 3, 1987), § 1(a) (providing for a new Section 49410.7 of the California Education Code). California's standard is based on transmission electron microscopy monitoring of fibers longer than one micron.

20/ H-6260, Rhode Island General Assembly, Jan. Sess. (July 3, 1985), § 1.23-24.5-5(b). Rhode Island thus has based its standard on both NIOSH optical microscopy that monitors fibers longer than 5 microns and the commonly accepted conversion of such index fibers to TEM mass measurements.

21/ See H.B. 456-FN New Hampshire General Court, 1986 Sess. (May 28, 1986), Ch. 141.E:6.I and New Hampshire Asbestos Abatement Rules §§ 5011.04 & 5011.05; S.B. 986, Florida Legislature, 1987 Sess. (Oct. 1, 1987), § 6.

legislation requiring the use of air monitoring for the assessment of asbestos-containing materials in state-owned buildings. The Florida law also established an abatement "action level" of 0.01 f/cc, using a tiered system of optical and electron microscopy techniques. 22/

In 1988, two more states followed suit. Colorado's General Assembly recently enacted legislation requiring specification of a "maximum allowable asbestos level" of 0.01 f/cc to govern asbestos exposure "in locations to which the general public has access." 23/ Regulations implementing this mandate have been proposed by the state's Air Quality Control Commission, which will hold a rulemaking hearing on October 21. 24/ A 0.01 f/cc standard for Louisiana was passed on July 6, 1988. 25/

In addition, a New York State bill that would establish an asbestos program for state-owned buildings, including designation of an indoor non-occupational exposure standard,

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22/ Senate Bill 986, Florida Legislature, 1987 Sess.

23/ Senate Bill 191 § 1, 56th General Assembly, 2d Sess.

24/ See Notice of Rulemaking Hearing Before the Colorado Air Quality Control Commission.

25/ S.B. 738, Louisiana Legislature, 1988 Sess. (July 6, 1988).

was introduced on March 28, 1988. 26/ And Minnesota law specifically authorized the State's Department of Health to "adopt rules establishing an indoor air standard for asbestos," and provided an interim 0.01 f/cc standard for abatement clearance purposes. 27/ The Department's rules promulgated pursuant to this statute adopt a 0.01 f/cc "general purpose" standard for the maximum allowable level outside an asbestos abatement area, the maximum permissible concentration remaining in the air after abatement and to define "abatement area" itself. 28/

- Warning and Notification Laws. In February 1988, California's Health and Welfare Agency promulgated "emergency" regulations implementing the State's Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Proposition 65 requires that "clear and reasonable" warnings be provided by anyone who causes another to be exposed to any chemical known to be a reproductive toxicant or a carcinogen. 29/ Because asbestos is included among the substances known to California to cause cancer, warnings must be

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26/ S. 7780, New York Legislature, 1988 Sess. (Mar. 28, 1988).

27/ Minn. Stat. § 326.77(a).

28/ Minn. R. §§ 7005.1611-7005.1618 (promulgated Sept. 19, 1988).

29/ Cal. Health & Safety Code § 25249.6 (West 1988).

given to persons who are exposed to airborne asbestos fibers. No warnings are required, however, where the chemical poses no "significant risk" at the level of exposure involved. 30/ The Agency's regulations provide that exposure to 100 asbestos fibers per day (for 24 hours a day and 365 days a year over a 70-year lifetime) is the highest exposure level posing "no significant risk" of cancer. 31/

As pointed out by several commentors during the regulation's comment period, however, the 100 fibers/day standard is equivalent to 0.000005 f/cc -- substantially below ambient levels in many parts of California and well below the limit of reliable detection for measurement of asbestos fibers according to standard phase contrast microscopy (PCM) or transmission electron microscopy (TEM) techniques. SBA has since learned that the Agency plans to amend its regulations to provide that the "no significant risk" level is not exceeded if asbestos exposures are undetectable by PCM or TEM techniques.

California also recently signed into law a statute requiring that owners of buildings containing asbestos inform their employees as to the existence and location of the asbestos, if known; "procedures and handling restrictions

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30/ Id. § 25249.10(c).

31/ California Emergency Regulations § 12711(a)(2).

necessary to prevent disturbance and release of asbestos," results of any air or medical monitoring studies conducted, and "[a]ny potential health risk or impact that may result from exposure to asbestos in the building." This notice may contain a "description and explanation of the health action levels or exposure standards established by the state or federal government." 32/

The San Francisco Board of Supervisors' Committee on Public Works recently proposed that sellers of nonresidential buildings be required to disclose to their buyers the existence of asbestos in the building being sold, along with what efforts, if any, the seller has made to determine whether the building contains asbestos. The proposal would also require sellers to disclose "[p]otential health risks or impacts that may result from exposure to asbestos." 33/ In testimony presented to the Public Works Committee, SBA urged the Committee to promulgate a 0.01 f/cc exposure standard to supplement these required warnings, in order to avoid vague, subjective or overly general pronouncements by sellers. The Committee held hearings on the proposal on October 13; a vote will follow later this year.

32/ See A.B. 3713, California Legislature, Reg. Sess. (introduced Feb. 18, 1988).

33/ Proposed Chapter 57 § 5701, amending Part II, Chapter I of the San Francisco Municipal Code.

• "Hold Harmless" laws. In April 1985, the Tennessee General Assembly passed a bill holding local education agency employees absolutely immune from liability for acts and omissions arising from the detection, management, or removal of asbestos from buildings owned or controlled by a local education agency. The new statute, signed into law on April 15, 1986, also requires the State to defend local education agencies and their employees in cases involving claims of injury or damage alleged to have been caused by acts or omissions related to asbestos in buildings. Finally, the law directs the Attorney General to conduct a study of "potential liability created under claims arising from public schools and the most appropriate method to protect local education agency employees from liability under these actions while providing injured parties an avenue of relief." 34/

Illinois Public Act 84-1445 requires the State to defend and indemnify asbestos abatement contractors from liability arising out of clean up efforts. The State Attorney General will defend contractors upon a 15 day notice (or provide private counsel), and pay for approved court and litigation costs.

34/ S.B. 1852, Tennessee General Assembly (enacted Apr. 15, 1986).

If a court finds that an act or omission was within the scope of a State response action and not a result of contractor misconduct, the State will indemnify the contractor for damages awarded, court costs and attorneys fees. Fees will be paid from the State's Response Contractors Indemnification Fund, which is funded through a 5% payment to the fund from each response action contract let.

- Other laws. Pursuant to a 1986 statute, California has established an interdepartmental task force "to analyze the magnitude of the asbestos problem in public buildings." The task force, composed of representatives from the State Department of Health Services, the Department of Industrial Relations, the Department of General Services, and the Commission on Building Standards, is charged with developing a statewide inspection plan and a schedule for "assessing the presence and condition of asbestos in public buildings." In so doing, the task force is to inspect a "respective sample" of buildings, develop assessment criteria, design a system for keeping employees abreast of information about asbestos materials in the building, and "[r]eview the relevant research, laws and regulations and develop methods and standards to accurately assess the

potential for employee and public exposure to asbestos in public buildings. 35/

Similarly, New York City's Local Law 76, as amended by Local Law 80, requires the City's Department of Environmental Protection (DEP) to submit to the City Council "a report identifying the potential risks, if any, which may be posed to workers and the general public from asbestos which is not disturbed by renovation, alteration or demolition work and recommending action deemed appropriate to ameliorate such risks as may be identified." The report must be submitted by December 1, 1989.

The interim report completed pursuant to these requirements, submitted to the City Council in September 1988, concludes that "The data do not indicate the need for precipitals removal of asbestos from buildings. Indiscriminate removal of asbestos may create conditions that pose a greater risk than if nothing were done at all." 36/ DEP will review and refine the recommendations contained in the preliminary report by December 1, 1988.

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35/ A.B. 2070, California Legislature, amending Division 20 of the Health and Safety Code.

36/ Draft IV, In-Place Asbestos Interim Report Findings and Proposed Management Recommendations at 3 (emphasis in original).

The Safe Building Alliance appreciates the opportunity to submit this statement to the record of the Subcommittee's hearings on asbestos in public buildings. We pledge our cooperation to work with the Subcommittee in developing appropriate policies to govern asbestos-containing materials in buildings.

TESTIMONY OF SIGURD L. LUCASSEN,
GENERAL PRESIDENT, UNITED BROTHERHOOD
OF CARPENTERS AND JOINERS OF AMERICA
to
SUBCOMMITTEE ON HAZARDOUS WASTES
AND TOXIC SUBSTANCES
U.S. Senate Committee on Environment
and Public Works

The United Brotherhood of Carpenters and Joiners of America (UBC) appreciates the opportunity to comment on S.981, S.1809 and S.2687 concerning the removal of asbestos in public and commercial buildings. The UBC fully supports the Subcommittee's efforts to set standards for identification and abatement of hazardous asbestos in federal and other buildings.

The UBC has grave concerns about the dangers posed by damaged friable asbestos in federal and commercial buildings because our members and their families find themselves represented in all of the categories of persons at risk. The UBC represents over 600,000 workers. More than 400,000 of our members are directly employed in the construction industry and the predominant majority of the remainder are employed in industrial settings doing production and maintenance work. In addition, several thousand of our members are also engaged in federal and state public employment doing service and maintenance work in buildings the legislation targets. Thus, nearly all of our members will at one time or another be exposed to asbestos as occupants or workers in federal and commercial buildings, in particular our construction workers who are engaged in the demolition and renovation of such properties and who are also called upon to remove, repair and encapsulate asbestos.

In our view, these bills represent the next logical step in Congress' comprehensive efforts to control the danger of asbestos exposure. When faced with a similar danger to our school children and school employees, Congress acted forcefully in passing the Asbestos Hazards Emergency Response Act (AHERA). It now has ample documentation for the need for the extension of such controls to federal and commercial buildings. Indeed, even the Environmental Protection Agency's Public Building Study, though reaching a flawed conclusion, recognizes the seriousness of this problem.

In our view, any further delay in extending strong and useful protection for workers, occupants and the general public exposed unnecessarily to this hazard is simply unthinkable. The lack of national standards for asbestos hazards and abatement in federal and commercial buildings means that more and more of our members and public citizens will contract lung cancer or other deadly and dehabilitating diseases. Ultimately these diseases will cripple today's workers and will also place a monumental strain on our nation's overburdened health care system well into the next century.

Along with other labor organizations that have commented, we are also concerned about the lack of worker protection standards in the legislation as presently drafted. The health of the exposed public and of workers employed in asbestos abatement and related work must be Congress' overriding concern. We believe detailed training requirements for contractors and workers must

be included in these bills. In particular, we believe that the legislated standards must call for certification of asbestos abatement workers along with detailed provisions for supervisor and worker training and the training of inspectors, management planners and contractors. One of this union's highest priorities has been the support and enforcement of legislation and regulations designed to ensure that our members are not trading their long-term health and safety for a living wage. Without legislated training and education standards, Congress cannot assure itself of putting in place the protections American workers need and expect.

In the past, many of our members contracted asbestos-related diseases because the deadly effects of working with this mineral were largely unknown then. As a result, this union, and indeed our entire health care system, will be burdened for years to come with the medical and legal needs of workers who traded their long-term health for the simple right to feed their families. If Congress fails to mandate training and certification of <u>all</u> workers who come into contact with this deadly substance, we will have failed to learn anything from the miseries of today's victims.

The UBC is determined not to let this sorrowful history repeat itself. Like several other unions working in this area, we have begun a general awareness program for our members who might inadvertently come in contact with asbestos. We have also begun the costly and time-consuming training of our members who

intend to work in buildings either prior to, during or following the removal of asbestos. Our investment in our members' education and, ultimately, in their health will pay off for this country in the long run by extending the length and quality of their working lives.

It is time for this country to take a similar long-term view with respect to all workers. Without proper certification and training, those workers who are not members of our union or of other labor organizations involved in education and training, will face the same long-term health consequences as today's victims. While we are training our members, untrained or undertrained workers by the thousands are working around and even removing damaged asbestos from this country's public and commercial buildings. The EPA's former Administrator pointed out in the Public Building Study that

> as public and commercial buildings are sold, investors are increasingly insisting that the asbestos in the buildings be removed, as a condition of the purchase. Unless such removals are done correctly, exposure of asbestos to the public may actually be increased...[W]e [therefore] need to encourage an increase in the supply of these qualified professionals.

We therefore propose the following for inclusion in the pending bills:

1. Effective training and certification courses requiring at least a four-day, 32-hour program. In truth, we view the 32-hour program as a minimum and would prefer to see a 40-

hour course to keep up with the emerging technology in this area.

2. Accreditation based on rigorous curriculum requirements, course and trainer approvals and stringent examination and certification requirements. The AHERA Model Accreditation Plan contains many of the essentials we would like to see incorporated into this legislation.

3. And additional details from the abatement training program developed by our union in conjunction with Hunter College and Montefiore Medical Center for the training of our members nationwide. This program is a "state-of-the-art" training program providing workers with the best available technical and educational assistance.

We would be pleased to work with the Subcommittee in fleshing out the details of the proposal and, to that end, we offer the expertise of our academic and medical consultants from Hunter and Montefiore, as well as the construction and maintenance industry experiences of UBC representatives charged with implementing our nationwide program.

These accreditation, training and certification standards should apply to abatement work involving removal, repair or encapsulation as well as to operations and maintenance work. Since exposure exists in both settings so, too, must training and certification be required of workers in both settings.

We thank you for the opportunity to comment on these pending bills and we urge this Subcommittee to act as expeditiously as

possible to eradicate the overwhelming asbestos problem in federal and commercial buildings and to mandate, through strong training and accreditation standards, the protection of the workers who will be called upon to make these buildings safe for the American public's long-term use.

II

100TH CONGRESS
1ST SESSION

S. 981

To amend the Toxic Substances Control Act so as to require the Environmental Protection Agency to set standards for identification and abatement of hazardous asbestos in Federal and other buildings, and for other purposes.

IN THE SENATE OF THE UNITED STATES

APRIL 9 (legislative day, MARCH 30), 1987

Mr. STAFFORD (for himself, Mr. BAUCUS, Mr. DURENBERGER, Mr. MITCHELL, and Mr. CHAFEE) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

To amend the Toxic Substances Control Act so as to require the Environmental Protection Agency to set standards for identification and abatement of hazardous asbestos in Federal and other buildings, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Toxic Substances Control Act Amendments Act of 1987".

SEC. 2. AMENDMENT TO TOXIC SUBSTANCES CONTROL ACT.

The Toxic Substances Control Act is amended by adding at the end thereof the following:

"TITLE III—FEDERAL BUILDING ASBESTOS HAZARD ABATEMENT

"SEC. 301. SHORT TITLE.

"This title may be cited as the 'Federal Building Asbestos Hazard Abatement Act of 1987'.

"SEC. 302. CONGRESSIONAL FINDINGS AND PURPOSES.

"(a) FINDINGS.—

"(1) The Congress finds that—

"(A) hazardous asbestos is present in many Federal buildings and other buildings that are accessible to the public;

"(B) asbestos, if unrecognized or poorly managed, can cause serious adverse health effects, including lung cancer and other deadly and debilitating diseases;

"(C) though the Federal Government requires that school buildings be inspected for hazardous asbestos and that appropriate response actions be implemented, there is no such requirement affecting buildings that are owned or leased by the Federal Government, or other publicly accessible buildings;

"(D) many buildings have not been inspected for hazardous asbestos, while others have been subjected to expensive abatement projects with no

regulatory guidance from the Environmental Protection Agency on whether the actions are necessary, adequate, or safe; and

"(E) serious asbestos hazards continue to exist in certain buildings and some hazards actually may have been made worse due to the lack of national standards for asbestos hazards and abatement.

"(b) PURPOSES.—The purposes of this title are to—

"(1) provide for the establishment of Federal standards for the identification of and response to hazardous asbestos in Federal and other buildings; and

"(2) mandate safe and complete inspection and response in accordance with those standards.

"SEC. 303. DEFINITIONS.

"For purposes of this title, the term—

"(1) 'Administrator' means the Administrator of the Environmental Protection Agency;

"(2) 'Federal building' means any building which is owned by the Federal Government;

"(3) 'non-Federal building' means any building other than a Federal building, except that such term does not include any school building otherwise subject to an asbestos inspection and abatement program under Federal law, any private residential dwelling, or any

commercial residential building having fewer than 10 residential units;

"(4) 'covered non-Federal building' means any non-Federal building which is included on the schedule established by the Administrator pursuant to section 307(b) of this title;

"(5) 'covered building' means a Federal building or a covered non-Federal building;

"(6) 'accredited asbestos contractor' means an individual who has successfully completed an Environmental Protection Agency approved training program, or a training program relating to asbestos inspections and abatement adopted pursuant to section 306 of this title, or section 206 of this Act;

"(7) 'owner', when used in connection with a Federal building under this title, means the head of the department, agency, office, or other instrumentality of the United States having jurisdiction or control over such building;

"(8) 'asbestos' means asbestiform varieties of—

"(A) chrysotile (serpentine),

"(B) crocidolite (riebeckite),

"(C) amosite (cummingtonite-grunerite),

"(D) anthophyllite,

"(E) tremolite, or

"(F) actinolite.

"(9) 'asbestos-containing material' means any material which contains more than 1 percent asbestos by weight;

"(10) 'Guidance for Controlling Asbestos-Containing Material in Buildings', means the Environmental Protection Agency document with such title as in effect on March 31, 1986.

"(11) 'friable asbestos-containing material' means any asbestos-containing material applied on ceilings, walls, structural members, piping, duct work, or any other part of a building which when dry may be crumbled, pulverized, or reduced to powder by hand pressure. The term includes nonfriable asbestos-containing material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

"(12) 'most current guidance document' means the Environmental Protection Agency's 'Guidance for Controlling Asbestos-Containing Material in Buildings' as modified by the Environmental Protection Agency after March 31, 1986;

"(13) 'response action' means methods that protect human health and the environment from asbestos-

containing material. Such methods include methods described in chapters 3 and 5 of the Environmental Protection Agency's 'Guidance for Controlling Asbestos-Containing Materials in Buildings';

"(14) 'State' means a State, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and the Virgin Islands.

"SEC. 304. EPA REGULATIONS.

"(a) IN GENERAL.—Within 360 days after the date of the enactment of this title, the Administrator shall promulgate regulations as described in subsections (b) through (i). With respect to regulations described in such subsections, the Administrator shall issue an advanced notice of proposed rulemaking within 60 days after the date of the enactment of this title, and shall propose regulations within 180 days after such date. Any regulation promulgated under this section must protect human health and the environment.

"(b) INSPECTION.—The Administrator shall promulgate regulations which prescribe procedures, including the use of personnel accredited under section 306 of this title or section 206(b) or 206(c) of this Act, and laboratories accredited under section 206(d) of this Act, for determining whether asbestos-containing material is present in a covered building

under this title. The regulations shall provide for the exclusion of any covered building, or portion of such a building, if (1) an inspection of such building (or portion) was completed before the effective date of the regulations, and (2) the inspection meets the procedures and other requirements of the regulations under this title or of the 'Guidance for Controlling Asbestos-Containing Materials in Buildings' (unless the Administrator determines that an inspection in accordance with the guidance document is inadequate). The regulations shall require inspection of any such building (or portion of a building) that is not excluded by the preceding sentence.

"(c) CIRCUMSTANCES REQUIRING RESPONSE ACTIONS.—(1) The Administrator shall promulgate regulations which define the appropriate response action in a covered building under this title in at least the following circumstances:

"(A) DAMAGE.—Circumstances in which friable asbestos-containing material or its covering is damaged, deteriorated, or delaminated.

"(B) SIGNIFICANT DAMAGE.—Circumstances in which friable asbestos-containing material or its covering is significantly damaged, deteriorated, or delaminated.

"(C) POTENTIAL DAMAGE.—Circumstances in which—

"(i) friable asbestos-containing material is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities, and

"(ii) there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated.

"(D) POTENTIAL SIGNIFICANT DAMAGE.—Circumstances in which—

"(i) friable asbestos-containing material is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities, and

"(ii) there is a reasonable likelihood that the material or its covering will become significantly damaged, deteriorated, or delaminated.

"(2) In promulgating such regulations, the Administrator shall consider and assess the value of various technologies intended to improve the decisionmaking process regarding response actions and the quality of any work that is deemed necessary, including air monitoring and chemical encapsulants.

"(d) RESPONSE ACTIONS.—

"(1) IN GENERAL.—The Administrator shall promulgate regulations describing response actions in buildings under this title.

"(2) RESPONSE ACTION FOR DAMAGED ASBESTOS.—In the case of a response action for the circumstances described in subsection (c)(1)(A), methods for responding shall include methods identified in chapters 3 and 5 of the 'Guidance for Controlling Asbestos-Containing Material in Buildings'.

"(3) RESPONSE ACTION FOR SIGNIFICANTLY DAMAGED ASBESTOS.—In the case of a response action for the circumstances described in subsection (c)(1)(B), methods for responding shall include methods identified in chapter 5 of the 'Guidance for Controlling Asbestos-Containing Material in Buildings'.

"(4) RESPONSE ACTION FOR POTENTIALLY DAMAGED ASBESTOS.—In the case of a response action for the circumstances described in subsection (c)(1)(C), methods for responding shall include methods identified in chapters 3 and 5 of the 'Guidance for Controlling Asbestos-Containing Material in Buildings', unless other methods will eliminate the reasonable likelihood that the asbestos-containing material will become damaged, deteriorated, or delaminated.

"(5) RESPONSE ACTION FOR POTENTIALLY SIGNIFICANTLY DAMAGED ASBESTOS.—In the case of a response action for the circumstances described in subsection (c)(1)(D), methods for responding shall include methods identified in chapter 5 of the 'Guidance for Controlling Asbestos-Containing Material in Buildings', unless other methods will eliminate the reasonable likelihood that the asbestos-containing material will become significantly damaged, deteriorated, or delaminated.

"(e) IMPLEMENTATION.—The Administrator shall promulgate regulations requiring the implementation of response actions in covered buildings under this title and, where appropriate, for the determination of when a response action is completed. Such regulations shall include standards for the education and protection of both workers and building occupants for the following phases of activity:

"(1) Inspection.

"(2) Response action.

"(3) Post-response action, including any periodic reinspection of asbestos-containing material and long-term surveillance activity.

"(f) OPERATIONS AND MAINTENANCE.—The Administrator shall promulgate regulations to require implementation of an operations and maintenance and repair program as de-

scribed in chapter 3 of the 'Guidance for Controlling Asbestos-Containing Materials in Buildings' for all friable asbestos-containing material in a covered building under this title.

"(g) PERIODIC SURVEILLANCE.—The Administrator shall promulgate regulations to require the following:

"(1) An identification of the location of friable and nonfriable asbestos in a covered building under this title.

"(2) Provisions for surveillance and periodic reinspection of such friable and nonfriable asbestos.

"(3) Provisions for education of employees, including service and maintenance personnel, about the location of and safety procedures with respect to such friable and nonfriable asbestos.

"(h) TRANSPORTATION AND DISPOSAL.—The Administrator shall promulgate regulations which prescribe standards for transportation and disposal of asbestos-containing waste material to protect human health and the environment. Such regulations shall include such provisions related to the manner in which transportation vehicles are loaded and unloaded as will assure the physical integrity of containers of asbestos-containing waste material.

"(i) MANAGEMENT PLANS.—

"(1) IN GENERAL.—The Administrator shall promulgate regulations which require each owner of a

covered building to develop an asbestos management plan for covered buildings under this title, to begin implementation of such plan within 360 days after the date such building is required by section 307 to be inspected in accordance with section 304(b), and to complete implementation of such plan in a timely fashion. The regulations shall require that each plan include the following elements, wherever relevant to the building:

"(A) An inspection statement describing inspection and response action activities carried out before the date of the enactment of this title.

"(B) A description of the results of the inspection conducted pursuant to regulations under subsection (b), including a description of the specific areas inspected.

"(C) A detailed description of measures to be taken to respond to any friable asbestos-containing material pursuant to the regulations promulgated under subsections (c), (d), and (e), including the location or locations at which a response action will be taken, the method or methods of response action to be used, and a schedule for beginning and completing response actions.

"(D) A detailed description of any asbestos-containing material which remains in the covered

building once response actions are undertaken pursuant to the regulations promulgated under subsections (c), (d), and (e).

"(E) A plan for periodic reinspection and long-term surveillance activities developed pursuant to regulations promulgated under subsection (g), and a plan for operations and maintenance activities developed pursuant to regulations promulgated under subsection (f).

"(F) With respect to the person or persons who inspected for asbestos-containing material and who will design or carry out response actions with respect to the friable asbestos-containing material, one of the following statements:

"(i) If the State has adopted a contractor accreditation plan under section 306 of this title or section 206 of this Act, a statement that the person (or persons) is accredited under such plan.

"(ii) A statement that the owner used (or will use) persons who have been accredited by another State which has adopted a contractor accreditation plan under section 306 of this title or section 206 of this Act, or is accredited pursuant to an Administra-

tor-approved course under section 306(c) of this title or section 206(c) of this Act.

"(G) A list of the laboratories that analyzed any bulk samples of asbestos-containing material found in the building or air samples taken to detect asbestos in the covered building and a statement that each laboratory has been accredited pursuant to the accreditation program under section 206(d) of this Act.

"(H) With respect to each consultant who contributed to the management plan, the name of the consultant and one of the following statements:

"(i) If the State has adopted a contractor accreditation plan under section 306 of this title or section 206(b) of this Act, a statement that the consultant is accredited under such plan.

"(ii) A statement that the consultant is accredited by another State which has adopted a contractor accreditation plan under section 306(b) of this title or section 206(b) of this Act, or is accredited pursuant to an Administrator-approved course under section

306(c) of this title or section 206(c) of this Act.

"(I) An evaluation of resources needed to successfully complete response actions and carry out reinspection, surveillance, and operation and maintenance activities.

"(2) STATEMENT BY CONTRACTOR.—An owner may require each management plan to contain a statement signed by an accredited asbestos contractor that such contractor has prepared or assisted in the preparation of such plan, or has reviewed such plan, and that such plan is in compliance with the applicable regulations and standards promulgated or adopted pursuant to this section and other applicable provisions of law. Such a statement may not be signed by a contractor who, in addition to preparing or assisting in preparing the management plan, also implements (or will implement) the management plan.

"(3) WARNING LABELS.—(A) The regulations shall require that each owner who has inspected for and discovered any asbestos-containing material with respect to a building shall attach a warning label to any asbestos-containing material still in routine maintenance areas (such as boiler rooms) of the building, including—

"(i) friable asbestos-containing material which was responded to by a means other than removal, and

"(ii) asbestos-containing material for which no response action was carried out.

"(B) The warning label shall read, in print which is readily visible because of large size or bright color, as follows: '**CAUTION: ASBESTOS. HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT.**'.

"(4) PLAN MAY BE SUBMITTED IN STAGES.—An owner may submit a management plan in stages, with each submission covering only a portion of the covered buildings under this title, if the owner determines that such action would expedite the identification and abatement of hazardous asbestos-containing material in the covered buildings of the owner.

"(5) PUBLIC AVAILABILITY.—A copy of the management plan developed under the regulations shall be available in the administrative offices of the building for inspection by the public.

"(6) SUBMISSION TO ADMINISTRATOR.—Each plan developed under this subsection shall be submitted to the Administrator within 60 days following its preparation.

"(j) CHANGES IN REGULATIONS.—Changes may be made in the regulations promulgated under this section only by rule in accordance with section 553 of title 5, United States Code. Any such change must protect human health and the environment.

"(k) CHANGES IN GUIDANCE DOCUMENT.—Any change made in the 'Guidance for Controlling Asbestos-Containing Material in Buildings' shall be made only by rule in accordance with section 553 of title 5, United States Code, unless a regulation described in this section or section 203 of this Act dealing with the same subject matter is in effect. Any such change must protect human health and the environment.

"SEC. 305. REQUIREMENTS IF EPA FAILS TO PROMULGATE REGULATIONS.

"(a) IN GENERAL.—

"(1) FAILURE TO PROMULGATE.—If the Administrator fails to promulgate within the prescribed period—

"(A) regulations described in section 304(b) (relating to inspection);

"(B) regulations described in section 304(c), (d), (e), (f), (g), and (i) (relating to responding to asbestos); or

"(C) regulations described in section 304(h) (relating to transportation and disposal);

each owner of a covered building under this title shall carry out the requirements described in this section in subsection (b); subsections (c), (d), and (e); or subsection (f); respectively, in accordance with the Environmental Protection Agency's most current guidance document.

"(2) STAY BY COURT.—If the Administrator has promulgated regulations described in paragraph (1) (A), (B), or (C) within the prescribed period, but the effective date of such regulations has been stayed by a court for a period of more than 30 days, an owner of a covered building shall carry out the pertinent requirements described in this subsection in accordance with the Environmental Protection Agency's most current guidance document.

"(3) EFFECTIVE PERIOD.—The requirements of this section shall be in effect until such time as the Administrator promulgates the pertinent regulations or until the stay is lifted (as the case may be).

"(b) INSPECTION.—(1) Except as provided in paragraph (2), the owner of a building required by section 307 to conduct an inspection in accordance with section 304(b) of this title, within 540 days after the date of the enactment of this

title, shall conduct an inspection for asbestos-containing material, using personnel accredited under section 206(b) or 206(c) of this Act or section 306 of this title and laboratories accredited under section 206(d) of this Act in each covered building owned by such owner.

"(2) The owner may exclude from the inspection requirement in paragraph (1) any such building, or portion of a building, if (A) an inspection of such building (or portion) was completed before the date on which this section goes into effect, and (B) the inspection meets the inspection requirements of this section.

"(c) OPERATION AND MAINTENANCE.—Any such owner referred to in subsection (b)(1) shall, within 720 days after the date of the enactment of this title, develop and begin implementation of an operation and maintenance plan with respect to friable asbestos-containing material in a building designated on such schedule. Such plan shall provide for the education of service and maintenance personnel about safety procedures with respect to asbestos-containing material, including friable asbestos-containing material.

"(d) MANAGEMENT PLAN.—

"(1) IN GENERAL.—Each owner referred to in subsection (b)(1) shall—

"(A) develop a management plan for responding to asbestos-containing material in each such building,

"(B) begin implementation of such plan within 990 days after the date of the enactment of this title, and

"(C) complete implementation of such plan in a timely fashion.

"(2) PLAN REQUIREMENTS.—The management plan shall—

"(A) include the elements listed in section 304(i)(1), including an inspection statement as described in paragraph (3) of this section,

"(B) provide for the attachment of warning labels as described in section 304(i)(3),

"(C) be prepared in accordance with the most current guidance document, and

"(D) meet the standard described in paragraph (4) for actions described in that paragraph.

"(3) INSPECTION STATEMENT.—Each owner referred to in section (b)(1) shall complete an inspection statement, covering activities carried out before the date of the enactment of this title, which meets the following requirements:

"(A) The statement shall include the following information:

"(i) The dates of inspection.

"(ii) The name, address, and qualifications of each inspector.

"(iii) A description of the specific areas inspected.

"(iv) A list of the laboratories that analyzed any bulk samples of asbestos-containing material or air samples of asbestos found in any building and a statement describing the qualifications of each laboratory.

"(v) The results of the inspection.

"(B) The statement shall state whether any actions were taken with respect to any asbestos-containing material found to be present, including a specific reference to whether any actions were taken in the boiler room of the building. If any such action was taken, the following items of information shall be included in the statement:

"(i) The location or locations at which the action was taken.

"(ii) A description of the method of action.

"(iii) The qualifications of the persons who conducted the action.

"(4) STANDARD.—The ambient interior concentration of asbestos after the completion of actions described in the most current guidance document, other than the type of action described in section 304(f) and subsection (c) of this section, shall not exceed the ambient exterior concentration, discounting any contribution from any local stationary source. Either a scanning electron microscope or a transmission electron microscope shall be used to determine the ambient interior concentration. In the absence of reliable measurements, the ambient exterior concentration shall be deemed to be—

"(A) less than 0.003 fibers per cubic centimeter if a scanning electron microscope is used, and

"(B) less than 0.005 fibers per cubic centimeter if a transmission electron microscope is used.

"(5) PUBLIC AVAILABILITY.—A copy of the management plan shall be available in the administrative offices of such building or otherwise prominently displayed in such building for inspection by the public.

"(6) SUBMISSION TO THE ADMINISTRATOR.—Each plan developed under this subsection shall be submitted to the Administrator within 60 days following its preparation.

"(e) BUILDING OCCUPANT PROTECTION.—Such owner shall provide for the protection of covered building occupants during each phase of activity described in this section.

"(f) TRANSPORTATION AND DISPOSAL.—Such owner shall provide for the transportation and disposal of asbestos in accordance with the most recent version of the Environmental Protection Agency's 'Asbestos Waste Management Guidance' (or any successor to such document).

"SEC. 306. CONTRACTOR ACCREDITATION.

"(a) CONTRACTOR ACCREDITATION.—A person may not—

"(1) inspect for asbestos-containing material in a building under this title,

"(2) prepare a management plan for such a building, or

"(3) design or conduct response actions, other than the type of action described in sections 304(f) and 305(c), with respect to friable asbestos-containing material in such a building,

unless such person is accredited by a State under subsection (b) or subsection 206(b) of this Act or is accredited pursuant

to an Administrator-approved course under subsection (c), or under section 206(c) of this Act.

"(b) ACCREDITATION BY STATE.—

"(1) MODEL PLAN.—

"(A) PERSONS TO BE ACCREDITED.—Within 180 days after the date of the enactment of this title, the Administrator, in consultation with affected organizations, shall develop a model contractor accreditation plan for States to give accreditation to persons in the following categories:

"(i) Persons who inspect for asbestos-containing material in buildings under this title.

"(ii) Persons who prepare management plans for such buildings.

"(iii) Persons who design or carry out response actions, other than the type of action described in sections 304(f) and 305(c), with respect to friable asbestos-containing material in such buildings.

"(B) PLAN REQUIREMENTS.—The plan shall include a requirement that any person in a category listed in paragraph (1) achieve a passing grade on an examination and participate in continuing education to stay informed about current

asbestos inspection and response action technology. The examination shall demonstrate the knowledge of the person in areas that the Administrator prescribes as necessary and appropriate in each of the categories. Such examinations may include requirements for knowledge in the following areas:

"(i) Recognition of asbestos-containing material and its physical characteristics.

"(ii) Health hazards of asbestos and the relationship between asbestos exposure and disease.

"(iii) Assessing the risk of asbestos exposure through a knowledge of percentage weight of asbestos-containing material, friability, age, deterioration, location and accessibility of materials, and advantages and disadvantages of dry and wet response action methods.

"(iv) Respirators and their use, care, selection, degree of protection afforded, fitting, testing, and maintenance and cleaning procedures.

"(v) Appropriate work practices and control methods, including the use of high efficiency particle absolute vacuums, the use of

amended water, and principles of negative air pressure equipment use and procedures.

"(vi) Preparing a work area for response action work, including isolating work areas to prevent bystander or public exposure to asbestos, decontamination procedures, and procedures for dismantling work areas after completion of work.

"(vii) Establishing emergency procedures to respond to sudden releases.

"(viii) Air monitoring requirements and procedures.

"(ix) Medical surveillance program requirements.

"(x) Proper asbestos waste transportation and disposal procedures.

"(xi) Housekeeping and personal hygiene practices, including the necessity of showers, and procedures to prevent asbestos exposure to an employee's family.

"(2) STATE ADOPTION OF PLAN.—Each State shall adopt a contractor accreditation plan at least as stringent as the model plan developed by the Administrator under paragraph (1), within 180 days after the commencement of the first regular session of the legis-

lature of such State which is convened following the date on which the Administrator completes development of the model plan.

"(c) ACCREDITATION BY ADMINISTRATOR-APPROVED COURSE.—

"(1) COURSE APPROVAL.—Within 180 days after the date of the enactment of this title, the Administrator shall ensure that any Environmental Protection Agency-approved asbestos training course is consistent with the model plan (including testing requirements) developed under subsection (b). A contractor may be accredited by taking and passing such a course.

"(2) TREATMENT OF PERSONS WITH PREVIOUS ENVIRONMENTAL PROTECTION AGENCY ASBESTOS TRAINING.—A person who—

"(A) completed an Environmental Protection Agency-approved asbestos training course before the date of the enactment of this title, and

"(B) passed (or passes) an asbestos test either before or after the date of the enactment of this title,

may be accredited under paragraph (1) if the Administrator determines that the course and test are equivalent to the requirements of the model plan developed under subsection (b). If the Administrator so deter-

mines, the person shall be considered accredited for the purposes of this title until a date that is one year after the date on which the State in which such person is employed establishes an accreditation program pursuant to subsection (b).

"(3) LISTS OF COURSES.—The Administrator, in consultation with affected organizations, shall publish (and revise as necessary)—

"(A) a list of asbestos courses and tests in effect before the date of the enactment of this title which qualify for equivalency treatment under paragraph (2), and

"(B) a list of asbestos courses and tests which the Administrator determines under paragraph (1) are consistent with the model plan and which will qualify a contractor for accreditation under such paragraph.

"SEC. 307. CERTAIN BUILDINGS SUBJECT TO TITLE.

"(a) FEDERAL BUILDINGS.—Within 180 days after the promulgation of regulations under section 304(b), all Federal buildings shall be inspected in accordance with such regulations.

"(b) SCHEDULE FOR NON-FEDERAL BUILDINGS.—

"(1) PUBLICATION OF SCHEDULE.—Within the 360 days after the date of the enactment of this title,

the Administrator shall publish in the Federal Register a schedule identifying and designating, by category, type, or class, non-Federal buildings that shall be inspected in accordance with regulations promulgated under section 304(b) by dates established in such schedule. Except to the extent otherwise specifically provided herein, the development and publication of such schedule, including revisions and additions under paragraph (2) of this subsection, shall be within the discretion of the Administrator.

"(2) REVISIONS; ADDITIONS.—The Administrator shall, from time to time (but not less than biannually), review the schedule established pursuant to paragraph (1) of this subsection with a view to expediting, to the extent consistent with the availability of technical experts and personnel, and analytical resources, the inclusion on such schedule of additional categories, types, or classes of non-Federal buildings. Any such additions shall be published in the Federal Register.

"(3) MATTERS TO BE CONSIDERED IN DEVELOPING SCHEDULE.—In making the determination of any such category, type, or class of building for inclusion on such schedule, or revisions and additions thereto, the Administrator shall consider, among other items or matters—

"(A) the size of a building;

"(B) date of construction or renovation;

"(C) likelihood that building contains asbestos material;

"(D) availability of technical experts and personnel and analytical resources;

"(E) whether the determination is likely to adversely affect or impede the inspection for, or response to hazardous asbestos in school buildings;

"(F) number of occupants and visitors utilizing such building; and

"(G) likelihood of use by children.

"SEC. 308. EMERGENCY AUTHORITY.

"(a) EMERGENCY ACTION.—

"(1) AUTHORITY.—Whenever—

"(A) the presence of airborne asbestos or the condition of friable asbestos-containing material in a Federal building or covered non-Federal building poses an imminent and substantial endangerment to human health or the environment, and

"(B) the owner of such building is not taking sufficient action (as determined by the Administrator) to respond to the airborne asbestos or friable asbestos-containing material,

the Administrator is authorized to act to protect human health or the environment.

"(2) NOTIFICATION.—Before an emergency action is taken under this subsection, the Administrator shall notify the building owner.

"(3) COST RECOVERY.—The Administrator may seek reimbursement for all costs of an emergency action taken under this subsection in the United States District Court for the District of Columbia or for the district in which the emergency action occurred. In any action seeking reimbursement from an owner, the action shall be brought in the United States District Court for the district in which the building is located.

"(b) INJUNCTIVE RELIEF.—Upon receipt of evidence that the presence of airborne asbestos or the condition of friable asbestos-containing material in any such covered building poses an imminent and substantial endangerment to human health or the environment, the Administrator may request the attorney general to bring suit to secure such relief as may be necessary to respond to the hazard. The district court of the United States in the district in which the response will be carried out shall have jurisdiction to grant such relief, including injunctive relief.

"SEC. 309. FEDERAL LEASING POLICIES.

"On and after the expiration of the thirty-six-month period following the date of the enactment of this title, no department, agency, or other entity or instrumentality of the United States shall enter into any purchase agreement or lease for the acquisition of real property for use by any department, agency, or other entity or instrumentality of the United States, unless such property has been inspected in accordance with the provisions of this title and found to be free of any asbestos material, or such property has been inspected and is, at the time of any such purchase or lease, subject to a valid and current asbestos management plan that is in compliance with the provisions of this title and regulations and standards promulgated pursuant thereto.

"SEC. 310. STATE AND FEDERAL LAW.

"NO PREEMPTION.—Nothing in this title shall be construed, interpreted, or applied to preempt, displace, or supplant any other State or Federal law, whether statutory or common.

"SEC. 311. PUBLIC PROTECTION.

"(a) PUBLIC PROTECTION.—No State or the Federal Government may discriminate against a person in any way, including firing a person who is an employee, because the person provided information relating to a potential violation of this title to any other person, including a State or the Federal Government.

"(b) LABOR DEPARTMENT REVIEW.—Any public or private employee or representative of employees who believes he or she has been fired or otherwise discriminated against in violation of subsection (a) may within 90 days after the alleged violation occurs apply to the Secretary of Labor for a review of the firing or alleged discrimination. The review shall be conducted in accordance with section 11(c) of the Occupational Safety and Health Act.

"SEC. 312. ASBESTOS OMBUDSMAN.

"(a) APPOINTMENT.—In addition to the duties prescribed under section 212 of this Act for an Asbestos Ombudsman, the Asbestos Ombudsman appointed pursuant to such section shall also carry out the duties described in subsection (b).

"(b) DUTIES.—The duties of the Asbestos Ombudsman are—

"(1) to receive complaints, grievances, and requests for information submitted by any person with respect to any aspect of this title.

"(2) to render assistance with respect to the complaints, grievances, and requests received, and

"(3) to make such recommendations to the Administrator as the Ombudsman considers appropriate.

"SEC. 313. TRANSITION RULES.

"Any regulation of the Environmental Protection Agency under title I which is inconsistent with this title shall not be in effect after the date of the enactment of this title. Any advanced notice of proposed rulemaking, any proposed rule, and any regulation of the Environmental Protection Agency in effect before the date of the enactment of this title which is consistent with the regulations required under section 304 shall remain in effect and may be used to meet the requirements of section 304.".

SEC. 3. CONFORMING AMENDMENT TO TOXIC SUBSTANCES CONTROL ACT.

(a) CONFORMING AMENDMENT.—Section 15 of the Toxic Substances Control Act is amended in paragraph (1)—

(1) by striking out "or" before "(C)";

(2) by striking out the semicolon and inserting in lieu thereof a comma; and

(3) by adding at the end thereof the following: "or (D) any rule promulgated or order issued under title III;".

(b) TECHNICAL AMENDMENTS.—The Toxic Substances Control Act is amended by adding at the end of the table of contents in section 1 the following:

"TITLE III—FEDERAL BUILDING ASBESTOS HAZARD ABATEMENT

"Sec. 301. Short title.
"Sec. 302. Congressional findings and purposes.
"Sec. 303. Definitions.

"Sec. 304. EPA regulations.
"Sec. 305. Requirements if EPA fails to promulgate regulations.
"Sec. 306. Contractor and laboratory accreditation.
"Sec. 307. Certain buildings subject to title.
"Sec. 308. Emergency authority.
"Sec. 309. Federal leasing policies.
"Sec. 310. State and Federal law.
"Sec. 311. Public protection.
"Sec. 312. Asbestos ombudsman.
"Sec. 313. Transition rules.".

II

100TH CONGRESS
1ST SESSION

S. 1809

To require the Environmental Protection Agency to set standards for identification and abatement of hazardous asbestos in certain buildings, and for other purposes.

IN THE SENATE OF THE UNITED STATES

OCTOBER 22 (legislative day, OCTOBER 16), 1987

Mr. BAUCUS (for himself and Mr. STAFFORD) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

To require the Environmental Protection Agency to set standards for identification and abatement of hazardous asbestos in certain buildings, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Toxic Substances Control Act Amendments Act of 1987".

SEC. 2. AMENDMENT TO TOXIC SUBSTANCES CONTROL ACT.

The Toxic Substances Control Act is amended by adding at the end thereof the following:

"TITLE III—FEDERAL BUILDING ASBESTOS CONTROL ACT

"SEC. 301. SHORT TITLE.

"This title may be cited as the 'Federal Building Asbestos Control Act of 1987'.

"SEC. 302. CONGRESSIONAL FINDINGS AND PURPOSES.

"(a) FINDINGS.—The Congress finds that—

"(1) potentially hazardous asbestos is present in many Federal buildings and other buildings that are accessible to the public;

"(2) asbestos, if unrecognized or poorly managed, can cause serious adverse health effects, including lung cancer and other deadly and debilitating diseases;

"(3) though the Federal Government requires that school buildings be inspected for potentially hazardous asbestos and that appropriate response actions be implemented, there is no such requirement affecting buildings that are owned or leased by the Federal Government;

"(4) many buildings have not been inspected for hazardous asbestos, while others have been subjected to expensive abatement projects with no regulatory guidance from the Environmental Protection Agency on whether the actions are necessary, adequate, or safe; and

"(5) serious asbestos hazards continue to exist in certain buildings and some hazards actually may have been made worse due to the lack of national standards for asbestos hazards and abatement.

"(b) PURPOSES.—The purposes of this title are to—

"(1) provide for the establishment of Federal standards for the identification of and response to hazardous asbestos in Federal and other buildings; and

"(2) mandate safe and complete inspection and response in accordance with those standards.

"SEC. 303. DEFINITIONS.

"For purposes of this title, the term—

"(1) 'Administrator' means the Administrator of the Environmental Protection Agency;

"(2) 'Federal building' means any building which is owned or leased by the Federal Government;

"(3) 'non-Federal building' means any building other than a Federal building except that such term does not include any school building otherwise subject to an asbestos inspection and abatement program under Federal law, any private residential dwelling, or any commercial residential building having fewer than 10 a residential units;

"(4) 'covered building' means a Federal building;

"(5) 'accredited asbestos contractor' means an individual who has successfully completed an Environmental Protection Agency approved training program, or a training program relating to asbestos inspections and abatement adopted pursuant to section 206 of this Act;

"(6) 'owner', when used in connection with a Federal building under this title, means the head of the department, agency, office, or other instrumentality of the United States having jurisdiction or control over such building;

"(7) 'asbestos' means asbestiform varieties of—

"(A) chrysotile (serpentine),

"(B) crocidolite (riebeckite),

"(C) amosite (cummingtonite-grunerite),

"(D) anthophyllite,

"(E) tremolite, or

"(F) actinolite.

"(8) 'asbestos-containing material' means any material which contains more than 1 percent asbestos by weight;

"(9) 'Guidance for Controlling Asbestos-Containing Material in Buildings', means the Environmental Protection Agency document with such title as in effect on March 31, 1986.

"(10) 'friable asbestos-containing material' means any asbestos-containing material applied on ceilings, walls, structural members, piping, duct work, or any other part of a building which when dry may be crumbled, pulverized, or reduced to powder by hand pressure. The term includes nonfriable asbestos-containing material after such previously nonfriable material becomes damaged to the extent that when dry it may be crumbled, pulverized, or reduced to powder by hand pressure.

"(11) 'most current guidance document' means the Environmental Protection Agency's 'Guidance for Controlling Asbestos-Containing Material in Buildings' as modified by the Environmental Protection Agency after March 31, 1986;

"(12) 'response action' means methods that protect human health and the environment from asbestos-containing material. Such methods include methods described in chapters 3 and 5 of the Environmental Protection Agency's 'Guidance for Controlling Asbestos-Containing Materials in Buildings';

"(13) 'State' means a State, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the Northern Mariana Islands, the

Trust Territory of the Pacific Islands, and the Virgin Islands.

"(14) 'identifying characteristics' means a description of the asbestos or asbestos-containing material, including (but not limited to)—

"(A) the mineral or chemical constituents (or both) of the asbestos or material by weight or volume (or both);

"(B) the types or classes of the product in which the asbestos or material is contained;

"(C) the designs, patterns, or textures of the product in which the asbestos or material is contained; or

"(D) the means by which the product in which the asbestos or material is contained may be distinguishable from other products containing asbestos or asbestos-containing material;

"(15) 'miscellaneous material' means building material on structural components, structural members, or fixtures, such as floor and ceiling tiles; but such term does not include surfacing material or thermal system insulation;

"(16) 'surfacing material' means material in a building that is sprayed on surfaces, trowelled on surfaces, or otherwise applied to surfaces for acoustical,

fireproofing, or other purposes, such as acoustical plaster on ceilings and fireproofing material on structural members; and

"(17) 'thermal system insulation' means material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain or water condensation, or for other purposes.

"SEC. 304. EPA REGULATIONS.

"(a) IN GENERAL.—Within 360 days after the date of the enactment of this title, the Administrator shall promulgate regulations as described in subsections (b) through (i). With respect to regulations described in such subsections, the Administrator shall issue an advanced notice of proposed rulemaking within 60 days after the date of the enactment of this title, and shall propose regulations within 180 days after such date. Any regulation promulgated under this section must protect human health and the environment.

"(b) INSPECTION.—The Administrator shall promulgate regulations which prescribe procedures, including the use of personnel accredited under section 206(b) and section 206(c) of this Act, and laboratories accredited under section 206(d) of this Act, for determining whether asbestos-containing material is present in a covered building under this title. The regulations shall provide for the exclusion of any covered

building, or portion of such a building, if (1) an inspection of such building (or portion) was completed before the effective date of the regulations, and (2) the inspection meets the procedures and other requirements of the regulations under this title or of the 'Guidance for Controlling Asbestos-Containing Materials in Buildings' (unless the Administrator determines that an inspection in accordance with the guidance document is inadequate). The regulations shall require inspection of any such building (or portion of a building) that is not excluded by the preceding sentence.

"(c) CIRCUMSTANCES REQUIRING RESPONSE ACTIONS.—(1) The Administrator shall promulgate regulations which define the appropriate response action in a covered building under this title in at least the following circumstances:

"(A) DAMAGE.—Circumstances in which friable asbestos-containing material or its covering is damaged, deteriorated, or delaminated.

"(B) SIGNIFICANT DAMAGE.—Circumstances in which friable asbestos-containing material or its covering is significantly damaged, deteriorated, or delaminated.

"(C) POTENTIAL DAMAGE.—Circumstances in which—

"(i) friable asbestos-containing material is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities, and

"(ii) there is a reasonable likelihood that the material or its covering will become damaged, deteriorated, or delaminated.

"(D) POTENTIAL SIGNIFICANT DAMAGE.—Circumstances in which—

"(i) friable asbestos-containing material is in an area regularly used by building occupants, including maintenance personnel, in the course of their normal activities, and

"(ii) there is a reasonable likelihood that the material or its covering will become significantly damaged, deteriorated, or delaminated.

"(2) In promulgating such regulations, the Administrator shall consider and assess the value of various technologies intended to improve the decisionmaking process regarding response actions and the quality of any work that is deemed necessary, including air monitoring and chemical encapsulants.

"(d) RESPONSE ACTIONS.—

"(1) IN GENERAL.—The Administrator shall promulgate regulations describing response actions in buildings under this title.

"(2) RESPONSE ACTION FOR DAMAGED ASBESTOS.—In the case of a response action for the circumstances described in subsection (c)(1)(A), methods for responding shall include methods identified in chapters 3 and 5 of the 'Guidance for Controlling Asbestos-Containing Material in Buildings'.

"(3) RESPONSE ACTION FOR SIGNIFICANTLY DAMAGED ASBESTOS.—In the case of a response action for the circumstances described in subsection (c)(1)(B), methods for responding shall include methods identified in chapter 5 of the 'Guidance for Controlling Asbestos-Containing Material in Buildings'.

"(4) RESPONSE ACTION FOR POTENTIALLY DAMAGED ASBESTOS.—In the case of a response action for the circumstances described in subsection (c)(1)(C), methods for responding shall include methods identified in chapters 3 and 5 of the 'Guidance for Controlling Asbestos-Containing Material in Buildings', unless other methods will eliminate the reasonable likelihood that the asbestos-containing material will become damaged, deteriorated, or delaminated.

"(5) RESPONSE ACTION FOR POTENTIALLY SIGNIFICANTLY DAMAGED ASBESTOS.—In the case of a response action for the circumstances described in subsection (c)(1)(D), methods for responding shall include methods identified in chapter 5 of the 'Guidance for Controlling Asbestos-Containing Material in Buildings', unless other methods will eliminate the reasonable likelihood that the asbestos-containing material will become significantly damaged, deteriorated, or delaminated.

"(e) IMPLEMENTATION; NOTIFICATION.—(1) The Administrator shall promulgate regulations requiring the implementation of response actions in covered buildings under this title and, where appropriate, for the determination of when a response action is completed. Such regulations shall include standards for the education and protection of both workers and building occupants for the following phases of activity:

"(A) Inspection.

"(B) Response action.

"(C) Post-response action, including any periodic reinspection of asbestos-containing material and long-term surveillance activity.

"(2) In order to assure appropriate notice of affected State agencies and building occupants, the Administrator shall promulgate regulations which prescribe notification pro-

cedures prior to demolition and renovation of all Federal and non-Federal buildings prior to activities which could disturb asbestos or asbestos-containing materials.

"(f) OPERATIONS AND MAINTENANCE.—The Administrator shall promulgate regulations to require implementation of an operations and maintenance and repair program as described in chapter 3 of the 'Guidance for Controlling Asbestos-Containing Materials in Buildings' for all friable asbestos-containing material in a covered building under this title.

"(g) PERIODIC SURVEILLANCE.—The Administrator shall promulgate regulations to require the following:

"(1) An identification of the location of friable and nonfriable asbestos in a covered building under this title.

"(2) Provisions for surveillance and periodic reinspection of such friable and nonfriable asbestos.

"(3) Provisions for education of employees and occupants, including service and maintenance personnel, about the location of and safety procedures with respect to such friable and nonfriable asbestos.

"(h) TRANSPORTATION AND DISPOSAL.—The Administrator shall promulgate regulations which prescribe standards for transportation and disposal of asbestos-containing waste material to protect human health and the environment. Such regulations shall include such provisions related to the

manner in which transportation vehicles are loaded and unloaded as will assure the physical integrity of containers of asbestos-containing waste material.

"(i) MANAGEMENT PLANS.—

"(1) IN GENERAL.—The Administrator shall promulgate regulations which require each owner of a covered building to develop an asbestos management plan for covered buildings under this title, to begin implementation of such plan within 360 days after the date such building is required by section 307 to be inspected in accordance with section 304(b), and to complete implementation of such plan within 24 months. The regulations shall require that each plan include the following elements, wherever relevant to the building:

"(A) An inspection statement describing inspection and response action activities carried out before the date of the enactment of this title.

"(B) A description of the results of the inspection conducted pursuant to regulations under subsection (b), including a description of the specific areas inspected.

"(C) A detailed description of measures to be taken to respond to any friable asbestos-containing material pursuant to the regulations promulgated under subsections (c), (d), and (e), including

the location or locations at which a response action will be taken, the method or methods of response action to be used, and a schedule for beginning and completing response actions.

"(D) A detailed description of any asbestos-containing material which remains in the covered building once response actions are undertaken pursuant to the regulations promulgated under subsections (c), (d), and (e).

"(E) A plan for periodic reinspection and long-term surveillance activities developed pursuant to regulations promulgated under subsection (g), and a plan for operations and maintenance activities developed pursuant to regulations promulgated under subsection (f).

"(F) With respect to the person or persons who inspected for asbestos-containing material and who will design or carry out response actions with respect to the friable asbestos-containing material, one of the following statements:

"(i) If the State has adopted a contractor accreditation plan under section 206 of this Act, a statement that the person (or persons) is accredited under such plan.

"(ii) A statement that the owner used (or will use) persons who have been accredited by another State which has adopted a contractor accreditation plan under section 206 of this Act, or is accredited pursuant to an Administrator-approved course under section 206(c) of this Act.

"(G) A list of the laboratories that analyzed any bulk samples of asbestos-containing material found in the building or air samples taken to detect asbestos in the covered building and a statement that each laboratory has been accredited pursuant to the accreditation program under section 206(d) of this Act.

"(H) With respect to each consultant who contributed to the management plan, the name of the consultant and one of the following statements:

"(i) If the State has adopted a contractor accreditation plan under section 206(b) of this Act, a statement that the consultant is accredited under such plan.

"(ii) A statement that the consultant is accredited by another State which has adopted a contractor accreditation plan under sec-

tion 206(b) of this Act, or is accredited pursuant to an Administrator-approved course under section 206(c) of this Act.

"(I) An evaluation of resources needed to successfully complete response actions and carry out reinspection, surveillance, and operation and maintenance activities.

"(2) STATEMENT BY CONTRACTOR.—An owner may require each management plan to contain a statement signed by an accredited asbestos contractor that such contractor has prepared or assisted in the preparation of such plan, or has reviewed such plan, and that such plan is in compliance with the applicable regulations and standards promulgated or adopted pursuant to this section and other applicable provisions of law. Such a statement may not be signed by a contractor who, in addition to preparing or assisting in preparing the management plan, also implements (or will implement) the management plan.

"(3) WARNING LABELS.—(A) The regulations shall require that each owner who has inspected for and discovered any asbestos-containing material with respect to a building shall attach a warning label to any asbestos-containing material still in routine mainte-

nance areas (such as boiler rooms) of the building, including—

"(i) friable asbestos-containing material which was responded to by a means other than removal, and

"(ii) asbestos-containing material for which no response action was carried out.

"(B) The warning label shall read, in print which is readily visible because of large size or bright color, as follows: **'CAUTION: ASBESTOS. HAZARDOUS. DO NOT DISTURB WITHOUT PROPER TRAINING AND EQUIPMENT.'**.

"(4) PLAN MAY BE SUBMITTED IN STAGES.—An owner may submit a management plan in stages, with each submission covering only a portion of the covered buildings under this title, if the owner determines that such action would expedite the identification and abatement of hazardous asbestos-containing material in the covered buildings of the owner.

"(5) PUBLIC AVAILABILITY.—A copy of the management plan developed under the regulations shall be available in the administrative offices of the building for inspection by the public.

"(6) SUBMISSION TO ADMINISTRATOR.—Each plan developed under this subsection shall be submitted

to the Administrator within 60 days following its preparation.

"(7) ASBESTOS ABATEMENT IN OCCUPIED BUILDINGS.—In any case in which asbestos abatement will occur in an occupied building subject to this Act, notice to that effect shall be prominently displayed in the lobby or other common area of the building at least 10 business days prior to such abatement or other activity.

"(j) CHANGES IN REGULATIONS.—Changes may be made in the regulations promulgated under this section only by rule in accordance with section 553 of title 5, United States Code. Any such change must protect human health and the environment.

"(k) CHANGES IN GUIDANCE DOCUMENT.—Any change made in the 'Guidance for Controlling Asbestos-Containing Material in Buildings' shall be made only by rule in accordance with section 553 of title 5, United States Code, unless a regulation described in this section or section 203 of this Act dealing with the same subject matter is in effect. Any such change must protect human health and the environment.

"SEC. 305. REQUIREMENTS IF EPA FAILS TO PROMULGATE REGULATIONS.

"(a) IN GENERAL.—

"(1) FAILURE TO PROMULGATE.—If the Administrator fails to promulgate within the prescribed period—

"(A) regulations described in section 304(b) (relating to inspection);

"(B) regulations described in section 304(c), (d), (e), (f), (g), and (i) (relating to responding to asbestos); or

"(C) regulations described in section 304(h) (relating to transportation and disposal);

each owner of a covered building under this title shall carry out the requirements described in this section in subsection (b); subsections (c), (d), and (e); or subsection (f); respectively, in accordance with the Environmental Protection Agency's most current guidance document.

"(2) STAY BY COURT.—If the Administrator has promulgated regulations described in paragraph (1) (A), (B), or (C) within the prescribed period, but the effective date of such regulations has been stayed by a court for a period of more than 30 days, an owner of a covered building shall carry out the pertinent requirements described in this subsection in accordance with the Environmental Protection Agency's most current guidance document.

"(3) EFFECTIVE PERIOD.—The requirements of this section shall be in effect until such time as the Administrator promulgates the pertinent regulations or until the stay is lifted (as the case may be).

"(b) INSPECTION.—(1) Except as provided in paragraph (2), the owner of a building required by section 307 to conduct an inspection in accordance with section 304(b) of this title, within 540 days after the date of the enactment of this title, shall conduct an inspection for asbestos-containing material, using personnel accredited under section 206(b) or 206(c) of this Act and laboratories accredited under section 206(d) of this Act in each covered building owned by such owner.

"(2) The owner may exclude from the inspection requirement in paragraph (1) any such building, or portion of a building, if (A) an inspection of such building (or portion) was completed before the date on which this section goes into effect, and (B) the inspection meets the inspection requirements of this section.

"(c) OPERATION AND MAINTENANCE.—Any such owner referred to in subsection (b)(1) shall, within 720 days after the date of the enactment of this title, develop and begin implementation of an operation and maintenance plan with respect to friable asbestos-containing material in a building designated on such schedule. Such plan shall provide for the

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education of service and maintenance personnel about safety procedures with respect to asbestos-containing material, including friable asbestos-containing material.

"(d) MANAGEMENT PLAN.—

"(1) IN GENERAL.—Each owner referred to in subsection (b)(1) shall—

"(A) develop a management plan for responding to asbestos-containing material in each such building,

"(B) begin implementation of such plan within 990 days after the date of the enactment of this title, and

"(C) complete implementation of such plan in a timely fashion.

"(2) PLAN REQUIREMENTS.—The management plan shall—

"(A) include the elements listed in section 304(i)(1), including an inspection statement as described in paragraph (3) of this section,

"(B) provide for the attachment of warning labels as described in section 304(i)(3),

"(C) be prepared in accordance with the most current guidance document, and

"(D) meet the standard described in paragraph (4) for actions described in that paragraph.

"(3) INSPECTION STATEMENT.—Each owner referred to in section (b)(1) shall complete an inspection statement, covering activities carried out before the date of the enactment of this title, which meets the following requirements:

"(A) The statement shall include the following information:

"(i) The dates of inspection.

"(ii) The name, address, and qualifications of each inspector.

"(iii) A description of the specific areas inspected.

"(iv) A list of the laboratories that analyzed any bulk samples of asbestos-containing material or air samples of asbestos found in any building and a statement describing the qualifications of each laboratory.

"(v) The results of the inspection.

"(B) The statement shall state whether any actions were taken with respect to any asbestos-containing material found to be present, including a specific reference to whether any actions were taken in the boiler room of the building. If any such action was taken, the following items of information shall be included in the statement:

"(i) The location or locations at which the action was taken.

"(ii) A description of the method of action.

"(iii) The qualifications of the persons who conducted the action.

"(4) STANDARD.—The ambient interior concentration of asbestos after the completion of actions described in the most current guidance document, other than the type of action described in section 304(f) and subsection (c) of this section, shall not exceed the ambient exterior concentration, discounting any contribution from any local stationary source. Either a scanning electron microscope or a transmission electron microscope shall be used to determine the ambient interior concentration. In the absence of reliable measurements, the ambient exterior concentration shall be deemed to be—

"(A) less than 0.003 fibers per cubic centimeter if a scanning electron microscope is used, and

"(B) less than 0.005 fibers per cubic centimeter if a transmission electron microscope is used.

"(5) PUBLIC AVAILABILITY.—A copy of the management plan shall be available in the administrative offices of such building or otherwise prominently displayed in such building for inspection by the public. Notice as to the availability of such plan to the public, including where such plan may be obtained and the date for the completion of the implementation of such plan, shall be permanently posted in the lobby of each such building or other common area of such building.

"(6) SUBMISSION TO THE ADMINISTRATOR.—Each plan developed under this subsection shall be submitted to the Administrator within 60 days following its preparation.

"(e) BUILDING OCCUPANT PROTECTION.—Such owner shall provide for the protection of covered building occupants during each phase of activity described in this section.

"(f) TRANSPORTATION AND DISPOSAL.—Such owner shall provide for the transportation and disposal of asbestos in accordance with the most recent version of the Environmental Protection Agency's 'Asbestos Waste Management Guidance' (or any successor to such document).

"SEC. 306. CONTRACTOR ACCREDITATION.

"(a) CONTRACTOR ACCREDITATION.—A person may not—

"(1) inspect for asbestos-containing material in a building under this title,

"(2) prepare a management plan for such a building, or

"(3) design or conduct response actions, other than the type of action described in sections 304(f) and 305(c), with respect to friable asbestos-containing material in such a building,

unless such person is accredited by a State or is accredited pursuant to an Administrator-approved course pursuant to section 206 (b) or (c).

"(b) ACCREDITATION BY STATE.—For purposes of this title, the following categories of persons shall be considered to be accredited by a State or pursuant to an Administrator-approved course, if such person has been accredited under section 206(b) or section 206(c) of this Act:

"(1) Persons who inspect for asbestos-containing material in buildings under this title, or other buildings.

"(2) Persons who prepare management plans for such buildings.

"(3) Persons who design or carry out response actions, other than the type of action described in sections 304(f) and 305(c), with respect to friable asbestos-containing material in such buildings.

"SEC. 307. FEDERAL BUILDINGS SUBJECT TO TITLE.

"FEDERAL BUILDINGS.—Within 730 days after the date of enactment of this title, all Federal buildings shall be inspected in accordance with this title and regulations promulgated pursuant thereto.

"SEC. 308. FEDERAL LEASING POLICIES.

"On and after the expiration of the 24-month period following the date of the enactment of this title, any department, agency, or other entity or instrumentality of the United States entering into any purchase agreement, lease, or lease renewal, for the acquisition of real property for use by any department, agency, or other entity or instrumentality of the United States, shall not occupy such premises unless such property has been inspected in accordance with the provisions of this title and found to be free of any potentially asbestos material, or such property has been inspected and is, at the time of any such purchase or lease, subject to a valid and current asbestos management plan that is in compliance with the provisions of this title and regulations and standards promulgated pursuant thereto.

"SEC. 309. STATE AND FEDERAL LAW.

"Nothing in this title shall be construed, interpreted, or applied to preempt, displace, or supplant any other State or Federal law, whether statutory or common.

"SEC. 310. PUBLIC PROTECTION.

"(a) PUBLIC PROTECTION.—No State or the Federal Government may discriminate against a person in any way, including firing a person who is an employee, because the person provided information relating to a potential violation of this title to any other person, including a State or the Federal Government.

"(b) LABOR DEPARTMENT REVIEW.—Any public or private employee or representative of employees who believes he or she has been fired or otherwise discriminated against in violation of subsection (a) may within 90 days after the alleged violation occurs apply to the Secretary of Labor for a review of the firing or alleged discrimination. The review shall be conducted in accordance with section 11(c) of the Occupational Safety and Health Act.

"SEC. 311. ASBESTOS OMBUDSMAN.

"(a) APPOINTMENT.—The Asbestos Ombudsman appointed pursuant to section 212 of this Act shall also carry out the duties described in subsection (b).

"(b) DUTIES.—For purposes of this title, the duties of the Asbestos Ombudsman are—

"(1) to receive complaints, grievances, and requests for information submitted by any person with respect to any aspect of this title.

"(2) to render assistance with respect to the complaints, grievances, and requests received, and

"(3) to make such recommendations to the Administrator as the Ombudsman considers appropriate.

"SEC. 312. GRANTS.

"(a) FINANCIAL ASSISTANCE.—The Administrator is authorized to provide financial assistance, by grant or otherwise, to each of the several States to assist the States in defraying expenses incurred by them in carrying out certain enforcement activities under title II and this title. Such financial assistance shall be payable at such time, in such manner, and in such amount as the Administrator may determine.

"(b) AUTHORIZATION.—There are authorized to be appropriated such sums as may be necessary to carry out the provisions of this section.

"SEC. 313. TRANSITION RULES.

"Any regulation of the Environmental Protection Agency under title I which is inconsistent with this title shall not be in effect after the date of the enactment of this title. Any advanced notice of proposed rulemaking, any proposed rule, and any regulation of the Environmental Protection Agency in effect before the date of the enactment of this title which is consistent with the regulations required under section 304 shall remain in effect and may be used to meet the requirements of section 304.

"TITLE IV—ASBESTOS INFORMATION ACT OF 1987

"SEC. 401. SHORT TITLE.

"This title may be cited as the 'Asbestos Information Act of 1987'.

"SEC. 402. PURPOSE.

"The purpose of this title is to require asbestos manufacturers to submit information on their asbestos products to the Environmental Protection Agency.

"SEC. 403. SUBMISSION OF INFORMATION BY MANUFACTURER.

"Within 90 days after the date of the enactment of this Act, any person who manufactured or processed asbestos or asbestos containing material that was prepared for sale for use in a building (or whose corporate predecessor manufactured or processed such asbestos or material) shall submit to the Administrator of the Environmental Protection Agency the years of manufacture, the type or classes of product, and all other identifying characteristics of the asbestos or material. Such person may also submit to the Administrator protocols for samples of asbestos and asbestos containing materials.

"SEC. 404. PUBLICATION.

"Within 180 days after the date of the enactment of this Act, the Administrator shall publish and make available for public use the information submitted under section 403.".

SEC. 3. CONFORMING AMENDMENT TO TOXIC SUBSTANCES CONTROL ACT.

(a) CONFORMING AMENDMENT.—Section 15 of the Toxic Substances Control Act is amended in paragraph (1)—

(1) by striking out "or" before "(C)";

(2) by striking out the semicolon and inserting in lieu thereof a comma; and

(3) by adding at the end thereof the following: "or (D) any rule promulgated or order issued under title III;".

(b) TECHNICAL AMENDMENTS.—The Toxic Substances Control Act is amended by adding at the end of the table of contents in section 1 the following:

"TITLE III—FEDERAL BUILDINGS ASBESTOS CONTROL ACT

"Sec. 301. Short title.
"Sec. 302. Congressional findings and purposes.
"Sec. 303. Definitions.
"Sec. 304. EPA regulations.
"Sec. 305. Requirements if EPA fails to promulgate regulations.
"Sec. 306. Contractor and laboratory accreditation.
"Sec. 307. Federal buildings subject to title.
"Sec. 308. Federal leasing policies.
"Sec. 309. State and Federal law.
"Sec. 310. Public protection.
"Sec. 311. Asbestos ombudsman.
"Sec. 312. Grants.
"Sec. 313. Transition rules.".

"TITLE IV—ASBESTOS INFORMATION ACT OF 1987

"Sec. 401. Short title.
"Sec. 402. Purpose.
"Sec. 403. Submission of information by manufacturer.
"Sec. 404. Publication.".

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II

100TH CONGRESS
2D SESSION

S. 2687

To provide the Environmental Protection Agency and the public with additional information about asbestos products.

IN THE SENATE OF THE UNITED STATES

AUGUST 5, 1988

Mr. CHAFEE (for himself, Mr. BAUCUS, Mr. STAFFORD, and Mr. DURENBERGER) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

To provide the Environmental Protection Agency and the public with additional information about asbestos products.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Asbestos Information Act of 1988".

SEC. 2. DISCLOSURE OF INFORMATION BY MANUFACTURERS.

(a) REQUIREMENT.—Within ninety days after the date of the enactment of this Act, any person who manufactured or processed, before the date of the enactment of this Act, asbestos or asbestos-containing material that was prepared

for sale for use as surfacing material, thermal system insulation, or miscellaneous material in buildings (or whose corporate predecessor manufactured or processed such asbestos or material) shall submit to the Administrator of the Environmental Protection Agency the years of manufacture, the types or classes of product, and, to the extent available, other identifying characteristics reasonably necessary to identify or distinguish the asbestos or asbestos-containing material. Such person also may submit to the Administrator protocols for samples of asbestos and asbestos-containing materials.

(b) PUBLICATION.—Within one hundred and eighty days after the date of the enactment of this Act, the Administrator shall publish the information submitted under subsection (a).

SEC. 3. DEFINITIONS.

In this Act:

(1) The term "asbestos" means—

(A) chrysotile, amosite, or crocidolite, or

(B) in fibrous form, tremolite, anthophyllite, or actinolite.

(2) The term "asbestos-containing material" means any material containing more than one percent asbestos by weight.

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(3) The term "identifying characteristics" means a description of the asbestos or asbestos-containing material, including—

(A) mineral or chemical constituents (or both) of the asbestos or material by weight or volume (or both),

(B) the types or classes of the product in which the asbestos or material is contained,

(C) the designs, patterns, or textures of the product in which the asbestos or material is contained, and

(D) the means by which the product in which the asbestos or material is contained may be distinguishable from other products containing asbestos or asbestos-containing material.

(4) The term "miscellaneous material" means building material on structural components, structural members, or fixtures, such as floor and ceiling tiles. The term does not include surfacing material or thermal system insulation.

(5) The term "protocol" means any procedure for taking, handling, and preserving samples of asbestos and asbestos-containing material and for testing and analyzing such samples for the purpose of determining the person who manufactured or processed for sale

such samples and the identifying characteristics of such samples.

(6) The term "surfacing material" means material in a building that is sprayed on surfaces, trowelled on surfaces, or otherwise applied to surfaces for acoustical, fireproofing, or other purposes, such as acoustical plaster on ceilings and fireproofing material on structural members.

(7) The term "thermal system insulation" means material in a building applied to pipes, fittings, boilers, breeching, tanks, ducts, or other structural components to prevent heat loss or gain or water condensation, or for other purposes.

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